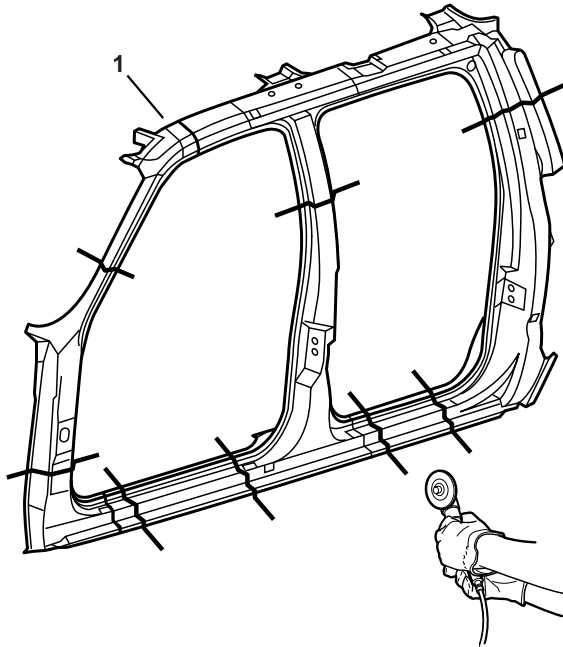


2002 Chevrolet Avalanche

Door Frame Sectioning

IMPORTANT: Section in specified areas only. Sectioning outside of these areas may compromise the structural integrity of the vehicle. Do not section in laser weld (1) areas of door frame sections.



The door frame opening is a unique laser-weld design incorporating multiple metal thicknesses to ensure the structural integrity of the cab. The door frame can be replaced at factory seams, but requires the removal of the roof panel, windshield and quarter panel. Sectioning procedures have been developed as a more cost-effective alternative to complete replacement. The specific area to be sectioned is determined by the extent of the damage to the vehicle.

Windshield Pillar Sectioning

Removal Procedure

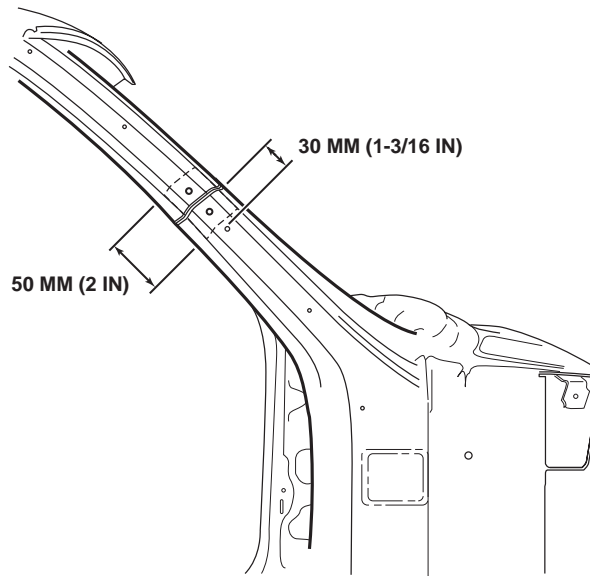
1. Remove all related panels and components.
2. Restore as much of the damage as possible to factory specifications.
3. Note the location and remove the following as necessary:

- Sealers
- Sound deadeners
- Anti-corrosion materials

IMPORTANT: Perform sectioning in the windshield area 30 mm (1-3/16 in.) above the third trim mounting hole.

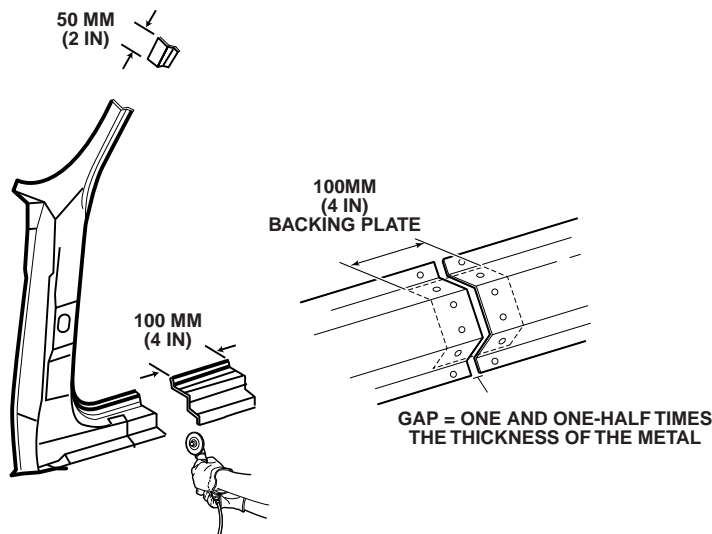
IMPORTANT: Take care not to damage the inner panels or reinforcements.

4. Cut the pillar in the locations where sectioning is to be performed.
5. Locate and drill out all factory welds. Note the number and location of the welds for installation of the service part.
6. Remove the damaged Windshield Pillar section.



Windshield Pillar Sectioning

Installation Procedure



1. Cut the replacement pillar in corresponding locations to fit the remaining original panel. The sectioning joint should be trimmed to allow a gap of one and one-half times the metal thickness at the sectioning joint.
2. Create a 50 mm (2 in.) backing plate from the unused portion of the service part. Trim the backing plate as necessary to fit behind the sectioning joint.
3. Perform additional sectioning procedures as necessary. Refer to Center Pillar Sectioning; Front Lower Pillar Sectioning; Rear Lock Pillar Sectioning; and Rocker Sectioning.
4. Drill 8 mm (5/16 in.) holes for plug welding in the original part. Locate these holes approximately 13 mm (1/2 in.) from the edge of the sectioning cuts and spaced 40 mm (1-1/2 in.) apart.

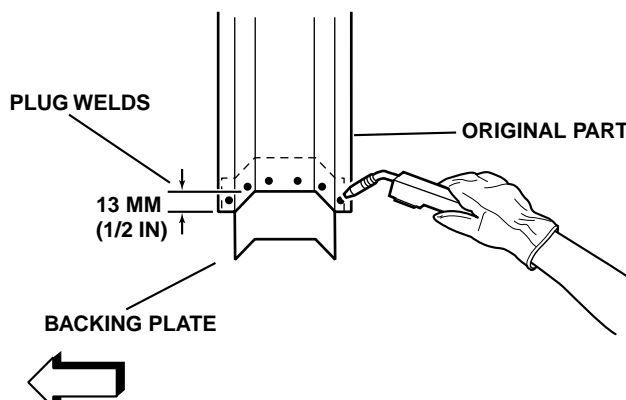
5. Drill 8 mm (5/16 in.) plug weld holes in the service panel as necessary in the locations noted from the original panel and along the sectioning cut.

CAUTION: FOAM SEALERS ARE FLAMMABLE AND SHOULD BE REMOVED FROM ALL WELD LOCATIONS.

6. Prepare the mating surfaces, as necessary.
7. Apply weld-through primer to all bare metal surfaces.

8. Fit the backing plate halfway into the sectioning joint, clamp and plug weld to the vehicle.
9. Align the Windshield Pillar to adjacent panels using three-dimensional measuring equipment.
10. Plug weld accordingly.

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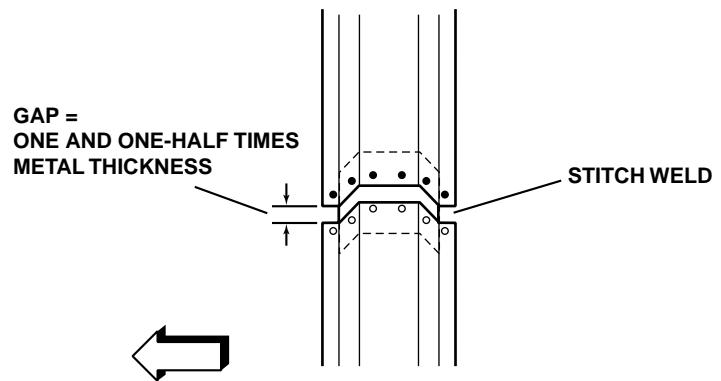


Windshield Pillar Sectioning Installation Procedure con't

11. Make 25 mm (1 in.) stitch welds along the seam with 25 mm (1 in.) gaps between them, then go back and complete the stitch weld. This will create a solid joint with minimal heat distortion.
12. Clean and prepare all welded surfaces.

IMPORTANT: Prior to refinishing, refer to the publication GM4901M-D-01 GM Approved Refinish Materials for recommended products. Do not combine paint systems. Refer to paint manufacturer's recommendations.

13. Apply an approved anti-corrosion primer.
14. Apply sealers and refinish as necessary.
15. Install all related panels and components.



Front Lower Hinge Pillar Sectioning

Removal Procedure

1. Visually inspect and restore as much of the damage as possible to factory specifications.
2. Remove all related panels and components.
3. Note the location and remove the following as necessary:
 - Sealers
 - Sound deadeners
 - Anti-corrosion materials
4. Measure 80 mm (3-1/8 inches) down from the large wiring harness hole in the hinge pillar and mark a horizontal line.
5. Cut the pillar in the locations where sectioning is to be performed.

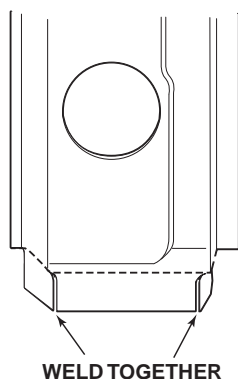
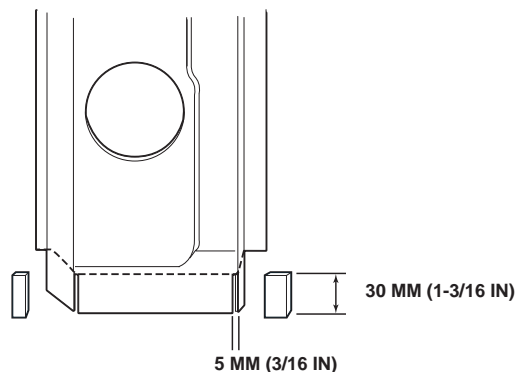
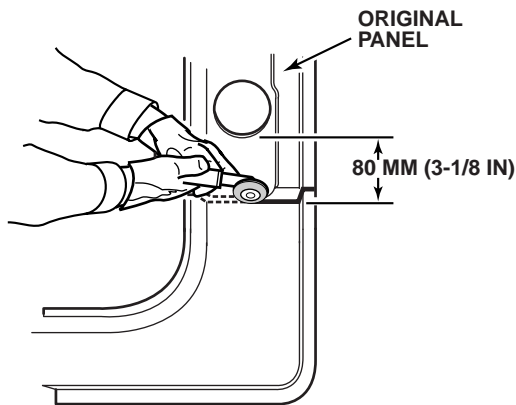
IMPORTANT: Take care not to damage the inner panel.

6. Locate, mark and drill out all necessary factory welds. Note the number of welds for the installation of the service section.
7. Remove the damaged section of the door frame opening.

IMPORTANT: The metal of the hinge pillar is of a heavy gauge. However, the tabs can be created using the appropriate tools.

8. Cut and remove 30 mm (1-3/16 inches) from the flanges on either side of the remaining section of the original hinge pillar to create 30 mm (1-3/16 in.) tabs. Cut 5 mm (3/16 in.) wide gaps in the bottom corners.

9. Step the tabs inward to allow the door frame opening service section to fit over the original hinge pillar. Weld the tabs together along the edges.



Front Lower Hinge Pillar Sectioning

Installation Procedure

1. On the service part, measure 50 mm (2 in.) down from the large wiring harness hole in the hinge pillar and mark a horizontal line. Cut the hinge pillar along this line.

2. Perform additional sectioning procedures as necessary to remove the unused areas of the service part. Refer to Windshield Sectioning; Center Pillar, Rear Lock Pillar, and Rocker Sectioning.

NOTICE: In any area damaged beyond recognition, space plug weld holes every 40 mm (1-1/2 in.) apart.

3. Drill 8 mm (5/16 in.) plug weld holes as necessary in the locations noted from the original section. Also drill plug weld holes along the hinge pillar sectioning cut of the service part. These should be located approximately 15 mm (9/16 in.) from the edge of the cut.

CAUTION: FOAM SEALERS ARE FLAMMABLE AND SHOULD BE REMOVED FROM ALL WELD LOCATIONS.

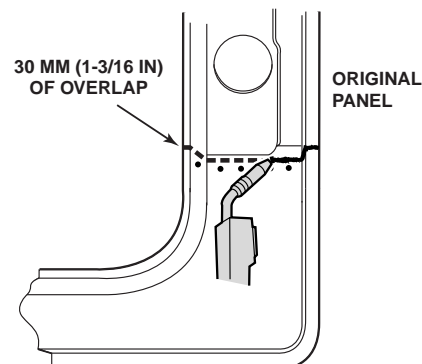
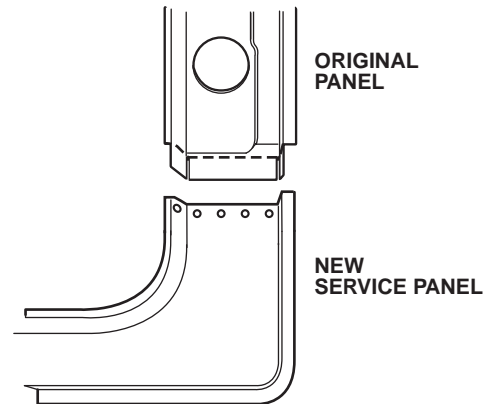
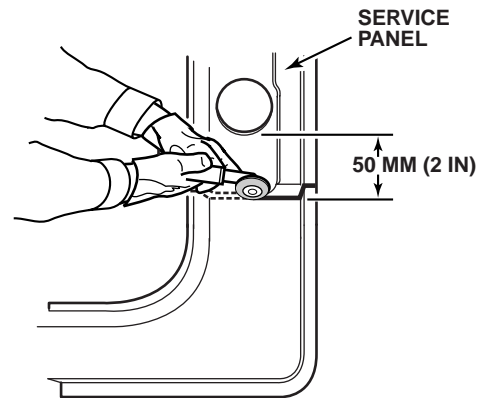
4. Prepare mating surfaces as necessary.
5. Apply weld-thru primer to all bare-metal surfaces.
6. Position the service section over the stepped tab on the original hinge pillar, allowing 30 mm (1-3/16 inches) of overlap. Check fit using three-dimensional measuring.
7. Plug weld service part in position.

8. Make 25 mm (1 in.) welds along the seam with 25 mm (1 in.) gaps between. Then go back and complete the stitch weld. This will create a solid joint with minimal heat distortion.

9. Clean and prepare all welded surfaces.

IMPORTANT: Prior to refinishing, refer to the publication GM4901M-D-01 GM Approved Refinish Materials for recommended products. Do not combine paint systems. Refer to paint manufacturer's recommendations.

10. Apply an approved anti-corrosion primer.
11. Apply sealers and refinish as necessary.
12. Install all related panels and components.



Center Pillar Sectioning

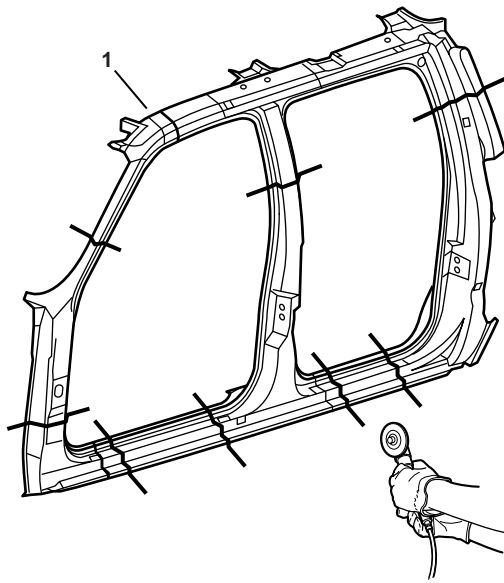
Removal Procedure

1. Remove all related panels and components.
2. Restore as much of the damage as possible to factory specifications.
3. Note the location and remove the following as necessary:

- Sealers
- Sound deadeners
- Anti-corrosion materials

IMPORTANT: Take care not to damage the inner panels or reinforcements.

4. Cut the Center Pillar in the location where sectioning is to be performed.
5. Locate and drill out all factory welds. Note the number and location of the welds for installation of the service part.
6. Remove the damaged Center Pillar section.



Center Pillar Sectioning

Installation Procedure

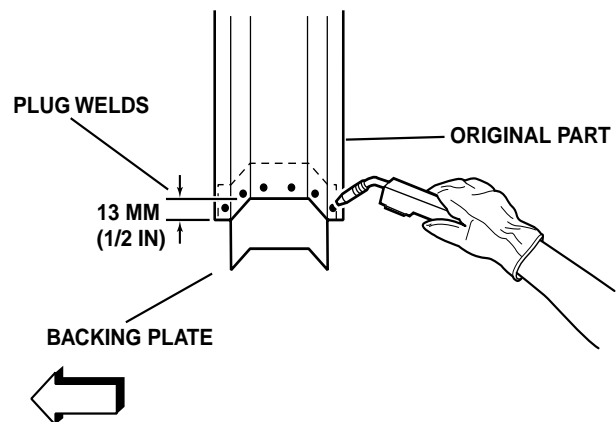
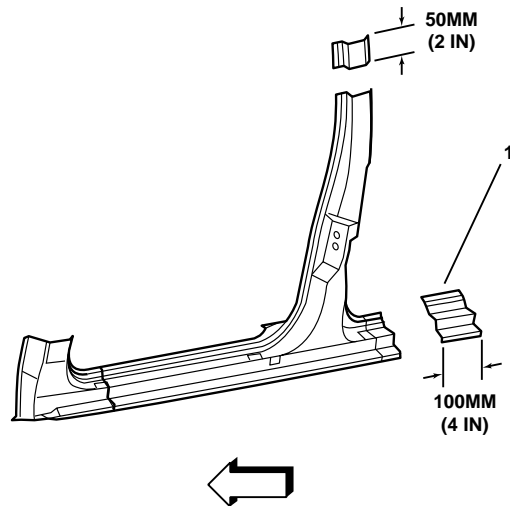
1. Cut the replacement Center Pillar in corresponding locations to fit the remaining original panel. The sectioning joint should be trimmed to allow a gap of one-and-one-half times the metal thickness at the sectioning joint.
2. Create a 50 mm (2 in.) backing plate from the unused portion of the service part. Trim the backing plate as necessary to fit behind the sectioning joint.
3. Perform additional sectioning procedures as necessary. Refer to Windshield Sectioning; Front Lower Pillar Sectioning; Rear Lock Pillar Sectioning; and Rocker Sectioning.
4. Drill 8 mm (5/16 in.) plug weld holes along the sectioning cut on the remaining original part.
5. Drill 8 mm (5/16 in.) plug weld holes in the service panel as necessary in the locations noted from the original panel and along the sectioning cut.

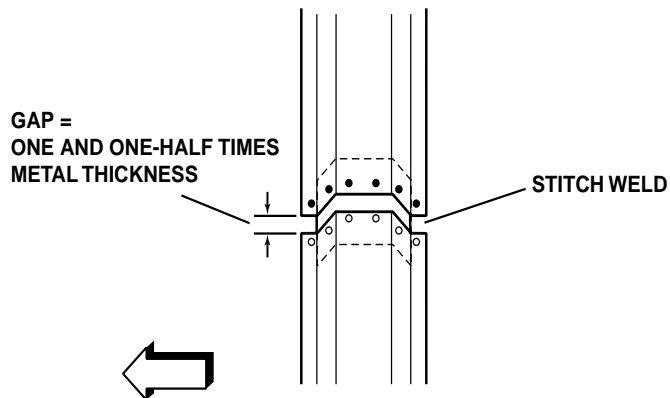
CAUTION: FOAM SEALERS ARE FLAMMABLE AND SHOULD BE REMOVED FROM ALL WELD LOCATIONS.

6. Prepare the mating surfaces as necessary.
7. Apply weld-through primer to all bare metal surfaces.

8. Fit the backing plate halfway into the sectioning joint, clamp and plug weld to the vehicle.

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Center Pillar Sectioning Installation Procedure con't

9. Align the Center Pillar to adjacent panels using three-dimensional measuring equipment.
10. Plug weld accordingly.
11. Make 25 mm (1 in.) stitch welds along the seam with 25 mm (1 in.) gaps between them, then go back and complete the stitch weld. This will create a solid joint with minimal heat distortion.
12. Clean and prepare all welded surfaces.

IMPORTANT: Prior to refinishing, refer to the publication GM4901M-D-01 GM Approved Refinish Materials for recommended products. Do not combine paint systems. Refer to paint manufacturer's recommendations.
13. Apply an approved anti-corrosion primer.
14. Apply sealers and refinish as necessary.
15. Install all related panels and components.

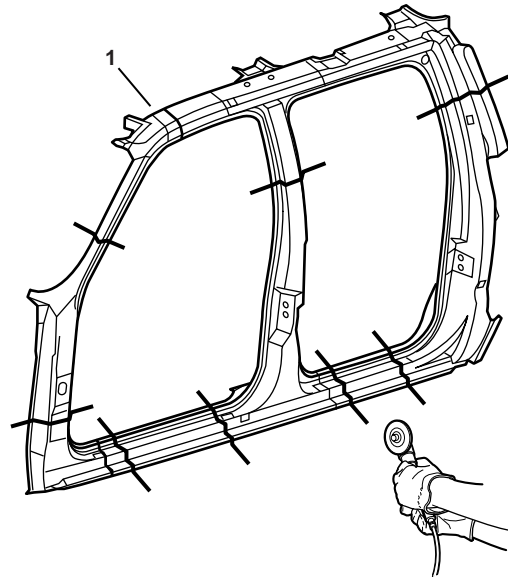
Rear Lock Pillar Sectioning

Removal Procedure

1. Remove all related panels and components.
2. Restore as much of the damage as possible to factory specifications.
3. Note the location and remove the following as necessary:
 - Sealers
 - Sound deadeners
 - Anti-corrosion materials

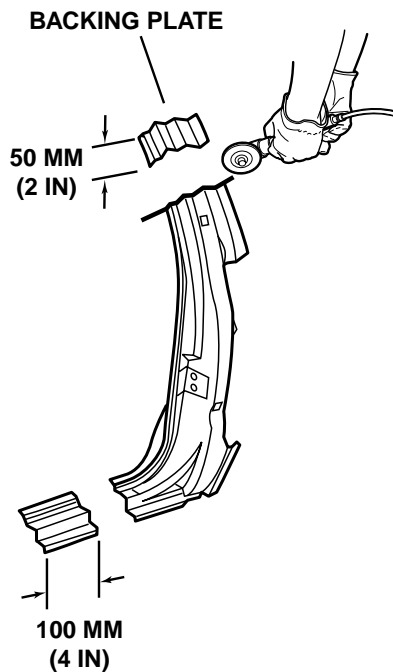
IMPORTANT: Take care not to damage the inner panels or reinforcements.

4. Cut the Rear Lock Pillar in the locations where sectioning is to be performed.
5. Locate and drill out all factory welds. Note the number and location of the welds for installation of the service part.
6. Remove the damaged Rear Lock Pillar section.



Rear Lock Pillar Sectioning

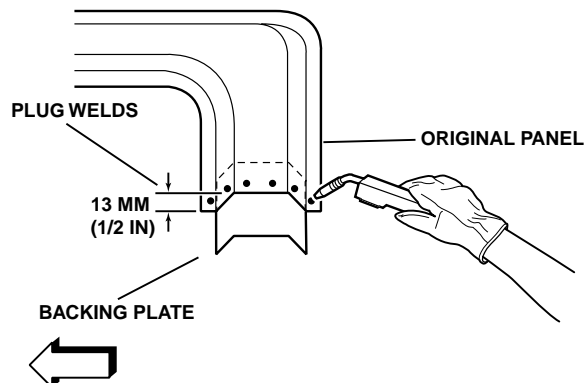
Installation Procedure



1. Cut the replacement Rear Lock Pillar in corresponding locations to fit the remaining original panel. The sectioning joint should be trimmed to allow a gap of one-and-one-half times the metal thickness at the sectioning joint.
2. Create a 50 mm (2 in.) backing plate from the unused portion of the service part. Trim the backing plate as necessary to fit behind the sectioning joint.
3. Perform additional sectioning procedures as necessary. Refer to Windshield Sectioning; Front Lower Pillar Sectioning; Center Pillar; and Rocker Sectioning.
4. Drill 8 mm (5/16 in.) plug weld holes along the sectioning cut on the remaining original part.
5. Drill 8 mm (5/16 in.) plug weld holes in the service panel as necessary in the locations noted from the original panel and along the sectioning cut.

CAUTION: FOAM SEALERS ARE FLAMMABLE AND SHOULD BE REMOVED FROM ALL WELD LOCATIONS.

6. Prepare the mating surfaces, as necessary.
7. Apply weld-through primer to all bare metal surfaces.



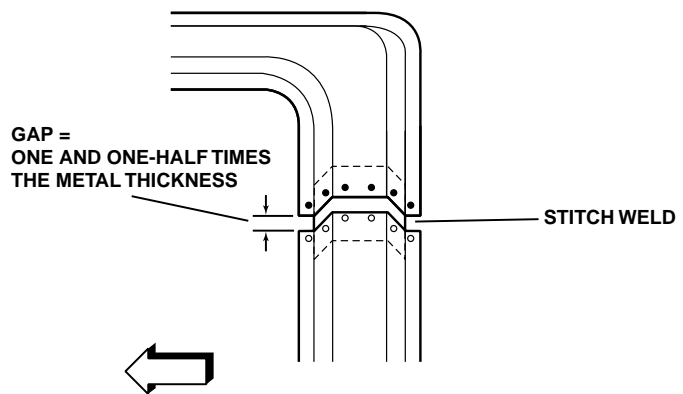
8. Fit the backing plate halfway into the sectioning joint, clamp and plug weld to the vehicle.

Rear Lock Pillar Sectioning Installation Procedure con't

9. Align the Rear Lock Pillar to adjacent panels using three-dimensional measuring equipment.
10. Plug weld accordingly.
11. Make 25 mm (1 in.) stitch welds along the seam with 25 mm (1 in.) gaps between them, then go back and complete the stitch weld. This will create a solid joint with minimal heat distortion.
12. Clean and prepare all welded surfaces.

IMPORTANT: Prior to refinishing, refer to the publication GM4901M-D-01 GM Approved Refinish Materials for recommended products. Do not combine paint systems. Refer to paint manufacturer's recommendations.

13. Apply an approved anti-corrosion primer.
14. Apply sealers and refinish as necessary.
15. Install all related panels and components.



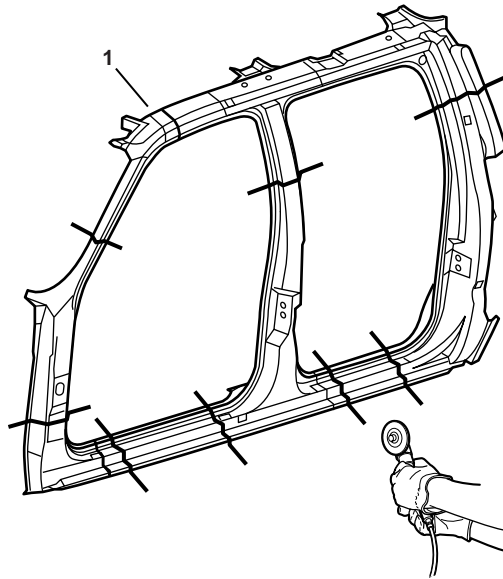
Rocker Panel Sectioning

Removal Procedure

1. Remove all related panels and components.
2. Restore as much of the damage as possible to factory specifications.
3. Note the location and remove the following as necessary:
 - Sealers
 - Sound deadeners
 - Anti-corrosion materials

IMPORTANT: Take care not to damage the inner panels or reinforcements.

4. Cut the Rocker Panel in the locations where sectioning is to be performed.
5. Locate and drill out all factory welds. Note the number and location of the welds for installation of the service part.
6. Remove the damaged Rocker Panel section.



Rocker Panel Sectioning

Installation Procedure

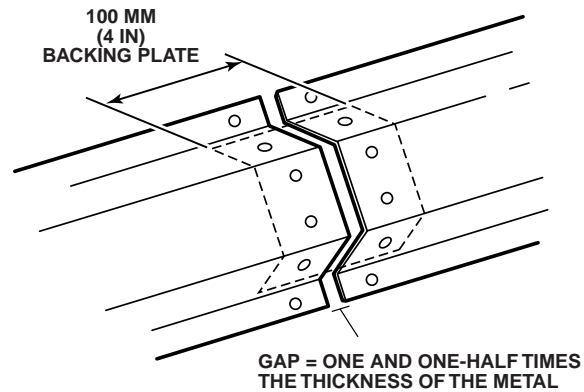
1. Cut the replacement Rocker Panel in corresponding locations to fit the remaining original panel. The sectioning joint should be trimmed to allow a gap of one-and-one-half times the metal thickness at the sectioning joint.
2. Create a 100 mm (4 in.) backing plate from the unused portion of the service part. Trim the backing plate as necessary to fit behind the sectioning joint.
3. Perform additional sectioning procedures as necessary. Refer to Windshield Sectioning; Front Lower Pillar Sectioning; Rear Lock Pillar Sectioning; and Center Pillar sectioning.
4. Drill 8 mm (5/16 in.) plug weld holes along the sectioning cut on the remaining original part.
5. Drill 8 mm (5/16 in.) plug weld holes in the service panel as necessary in the locations noted from the original panel and along the sectioning cut.

CAUTION: FOAM SEALERS ARE FLAMMABLE AND SHOULD BE REMOVED FROM ALL WELD LOCATIONS.

6. Prepare the mating surfaces as necessary.
7. Apply weld-through primer to all bare metal surfaces.
8. Fit the backing plate halfway into the sectioning joint, clamp and plug weld to the vehicle.
9. Align the Rocker Panel to adjacent panels using three-dimensional measuring equipment.
10. Plug weld service part in position.
11. Make 25 mm (1 in.) stitch welds along the seam with 25 mm (1 in.) gaps between them, then go back and complete the stitch weld. This will create a solid joint with minimal heat distortion.
12. Clean and prepare all welded surfaces.

IMPORTANT: Prior to refinishing, refer to the publication GM4901M-D-2000 "GM Approved Refinish Materials" for recommended products. Do not combine paint systems. Refer to paint manufacturer's recommendations.

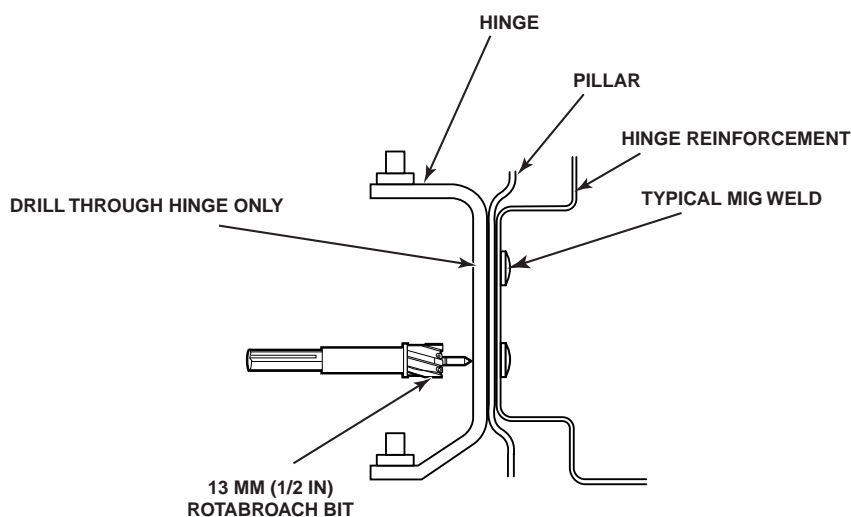
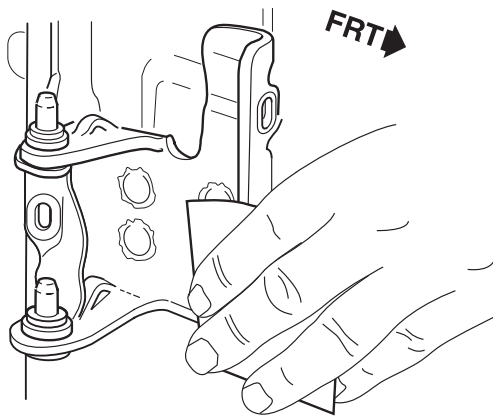
13. Apply an approved anti-corrosion primer.
14. Apply sealers and refinish as necessary.
15. Install all related panels and components.



Front Body-Side Hinge Replacement

Removal Procedure

1. Remove related panels and component.
2. Remove any excess sealer surrounding the existing hinge and scribe the location of the hinge on the hinge pillar.
3. Lightly hand-sand the existing hinge with 100 grit or finer sandpaper in order to locate the 4 welds that attach the hinge to the pillar.
IMPORTANT: Punch the center of the weld so that as much of the weld as possible is removed during the drilling.
4. Center punch each of the four weld marks on the original hinge.



IMPORTANT: Do not drill into the hinge pillar.

5. Drill through the hinge only, at each punch location. Use a 13 mm (1/2 in.) rotabroach hole saw or equivalent.
6. Remove the hinge. If necessary, use a chisel in order to separate the hinge from the pillar.
7. Remove all of the remaining weld from the pillar surface in order to ensure a flush fit of the service hinge.

Front Body-Side Hinge Replacement

Installation Procedure

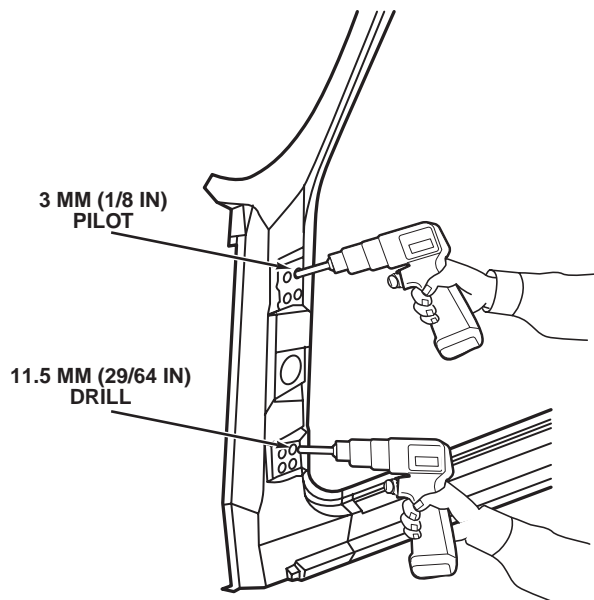
1. Repair any damage done to the pillar during the drilling or the removal.
2. Position the service hinge within the scribe marks on the pillar.
3. Center punch each stud location on the hinge pillar according to the service hinge.
4. Drill a 3 mm (1/8 in.) pilot hole at each center punch location.

IMPORTANT: Drill must be exact size.

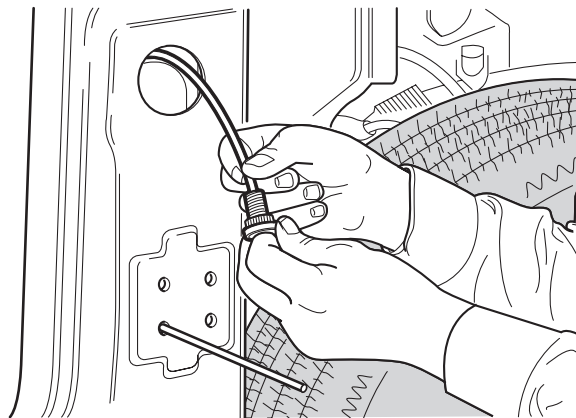
5. Drill an 11.5 mm (29/64 in.) hole at the pilot locations for the studs.

IMPORTANT: Prior to refinishing, refer to the publication GM4901M-D-2000 "GM Approved Refinish Materials" for recommended products. Do not combine paint systems. Refer to paint manufacturer's recommendations.

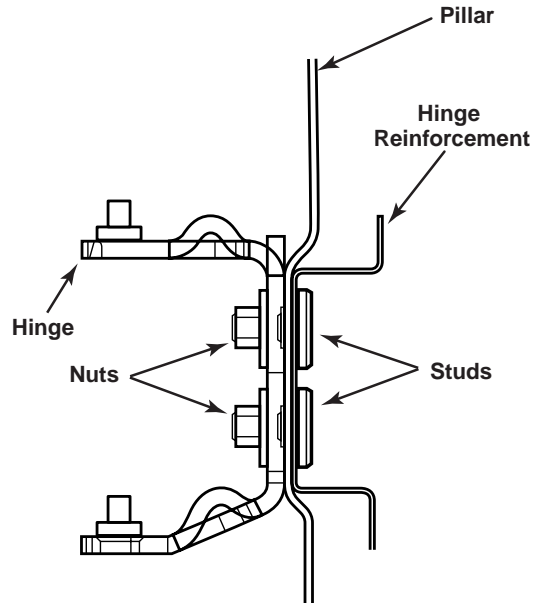
6. Clean and prepare all of the bare metal surfaces.
7. Apply an approved anti-corrosion primer.



8. Feed fish wire, GM P/N 15017229 or the equivalent, through the hinge, the hinge stud hole and out of the conduit hole in the pillar.
9. Install the stud, GM P/N 15017230, supplied with the service hinge into the wire end. Pull the stud into position.
10. Hold the stud in position with the hinge and remove the fish wire.
11. Draw the stud tight through the pillar. Use the nuts (GM P/N 11516746) supplied.
12. Repeat steps 7-10 on the remaining stud locations.
13. Remove each service nut.
14. Apply a full-bodied caulk to the entire hinge mounting surface in order to ensure a proper seal.



Front Body-Side Hinge Replacement Installation Procedure con't



15. Install the hinge to the pillar. Use the supplied nuts.
16. Torque the hinge to the pillar nuts to 25 N·m (18 ft lb.).
17. Clean and prepare all of the surfaces as necessary for refinishing.
18. Apply the sealers. Refinish the surfaces as necessary.
19. Install and align all of the related panels and the components.

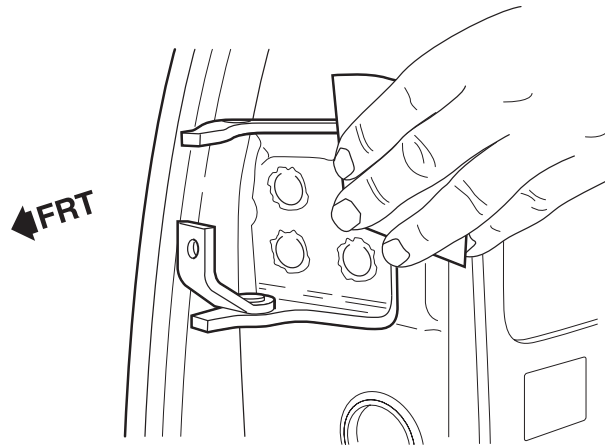
Front Door-Side Hinge Replacement

Removal Procedure

1. Remove related panels and components.
2. Remove any excess sealer surrounding the hinge and scribe the location of the hinge on the door.
3. Lightly hand-sand the existing body hinge with 100 grit or finer sandpaper in order to locate the 4 welds that attach the hinge to the door.

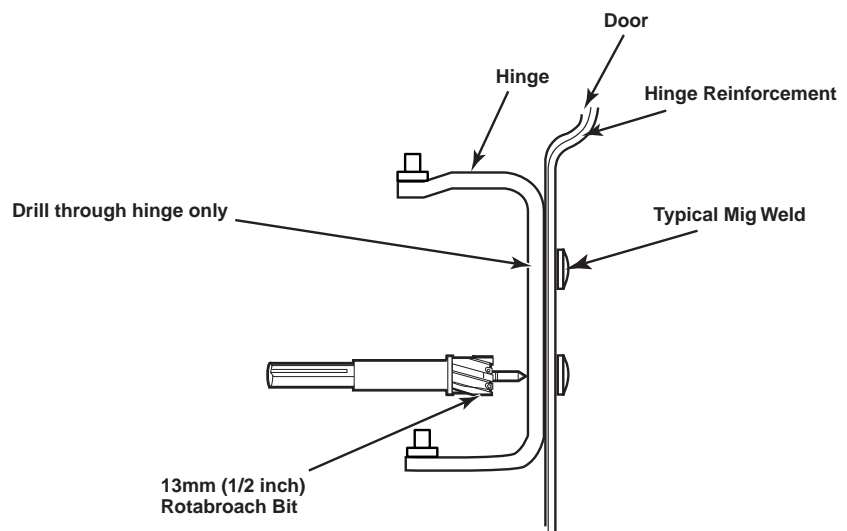
IMPORTANT: Punch the center of the weld so that as much of the weld is removed during the drilling as possible.

4. Center punch each of the four weld marks on the original hinge base.



IMPORTANT: Do not drill into the door.

5. Drill through hinge base only at the punch location. Use a 13 mm (1/2 in.) rotabroach hole saw, or the equivalent.
6. Remove hinge. If necessary, use a chisel to separate the hinge from the door.
7. Remove all of the remaining weld from the door surface in order to ensure a flush fit of the service hinge.



Front Door-Side Hinge Replacement

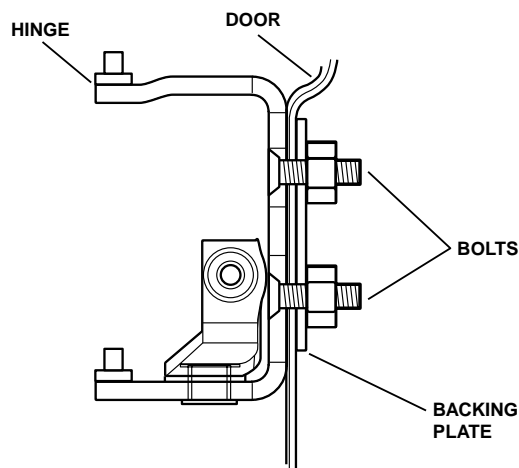
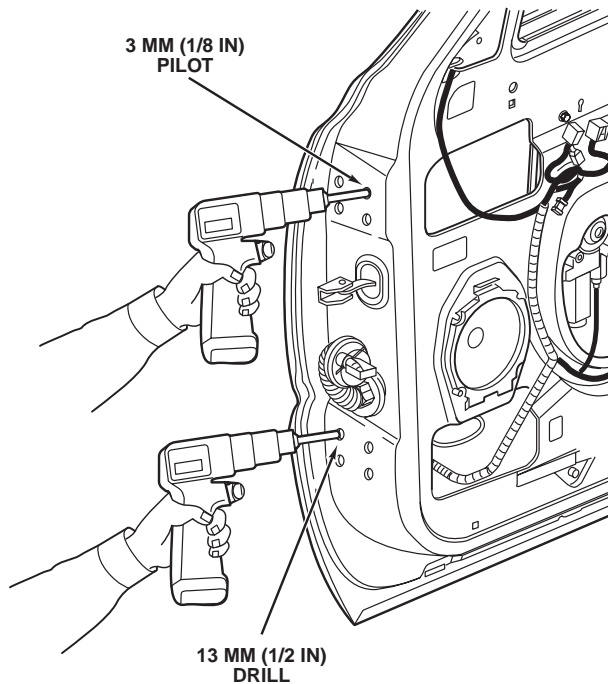
Installation Procedure

1. Repair any damage done to door during the drilling or the removal.
2. Clean and prepare the backing plate mounting surfaces in order to ensure a flush fit of the backing plate.
3. Position the service hinge within the scribe marks on the door.
4. Center punch each hole location on the door according to the service hinge.
5. Drill a 3 mm (1/8 in.) pilot hole at each center punch location.
6. Drill a 13 mm (1/2 in.) hole at the pilot locations.

IMPORTANT: Prior to refinishing, refer to the publication GM4901M-D-2000 "GM Approved Refinish Materials" for recommended products. Do not combine paint systems. Refer to paint manufacturer's recommendations.

7. Clean and prepare all of the bare metal surfaces.
8. Apply an approved anti-corrosion primer.
9. Apply full-bodied caulk to the entire hinge mounting surface in order to ensure a proper seal.

10. Align the hinge and the backing plate with the holes in the door (Fig. 4-34).
11. Install the bolts. Tighten the bolts to 25 N·m (18 ft lb).
12. Apply the sealers.
13. Refinish the metal surfaces as necessary.
14. Install and align all of the related panels and the components.



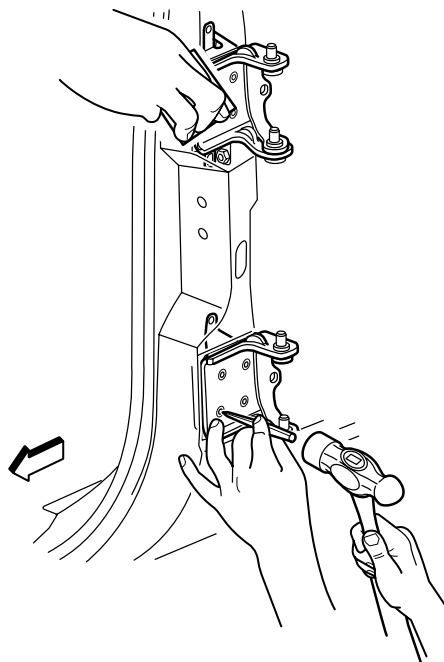
Rear Body-Side Hinge Replacement

Removal Procedure

1. Remove related panels and components.
2. Remove any excess sealer surrounding the existing hinge and scribe the location of the hinge on the hinge pillar.
3. Lightly hand-sand the existing hinge with 100 grit or finer sandpaper in order to locate the 4 welds that attach the hinge to the pillar.

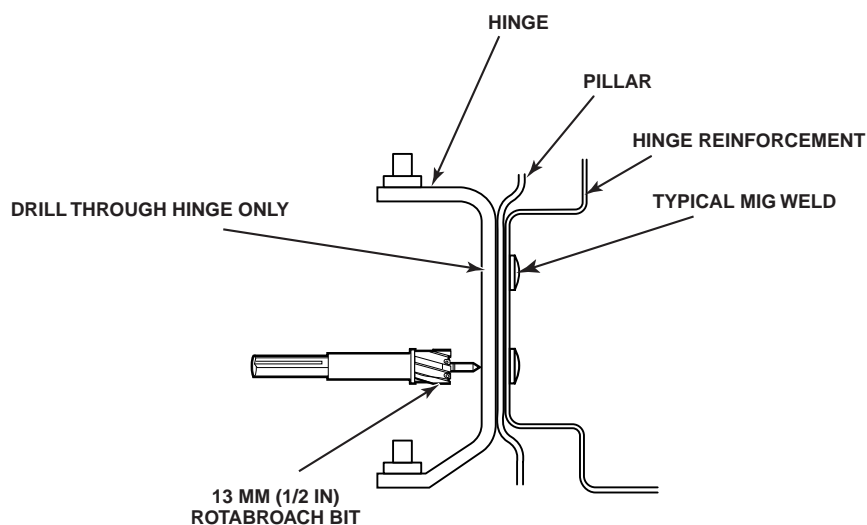
IMPORTANT: Punch the center of the weld so that as much of the weld as possible is removed during the drilling.

4. Center punch each of the 4 weld marks on the original hinge.



IMPORTANT: Do not drill into the hinge pillar.

5. Drill through the hinge only at each punch location. Use a 13 mm (1/2 in.) rotabroach hole saw or the equivalent.
6. Remove the hinge. If necessary, use a chisel in order to separate the hinge from the pillar.
7. Remove all of the remaining weld from the pillar surface in order to ensure a flush fit of the service hinge.



Rear Body-Side Hinge Replacement

Installation Procedure

1. Repair any damage done to the pillar during the drilling or the removal.
2. Position the service hinge within the scribe marks on the pillar.
3. Center punch each stud location on the hinge pillar according to the service hinge.
4. Drill a 3 mm (1/8 in.) pilot hole at each center punch location.

IMPORTANT: Drill must be exact size.

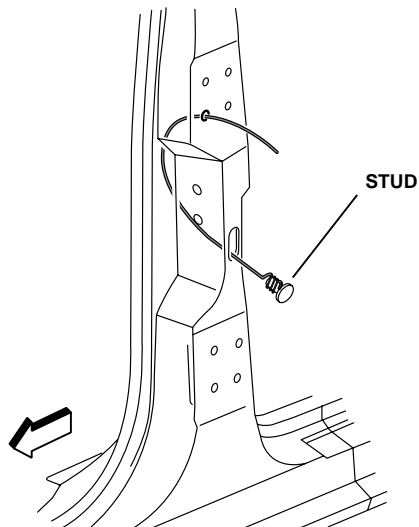
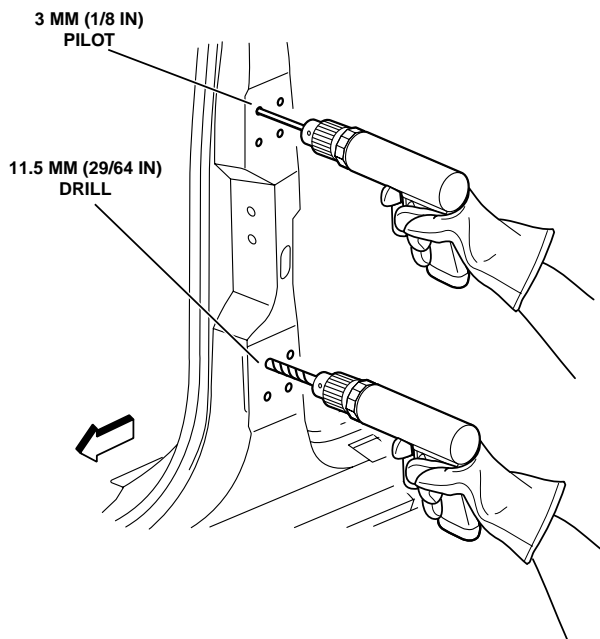
5. Drill an 11.5 mm (29/64 in.) hole at the pilot locations for the studs.

IMPORTANT: Prior to refinishing, refer to the publication GM4901M-D-01 GM Approved Refinish Materials for recommended products. Do not combine paint systems. Refer to paint manufacturer's recommendations.

6. Clean and prepare all of the bare metal surfaces.
7. Apply an approved anti-corrosion primer.

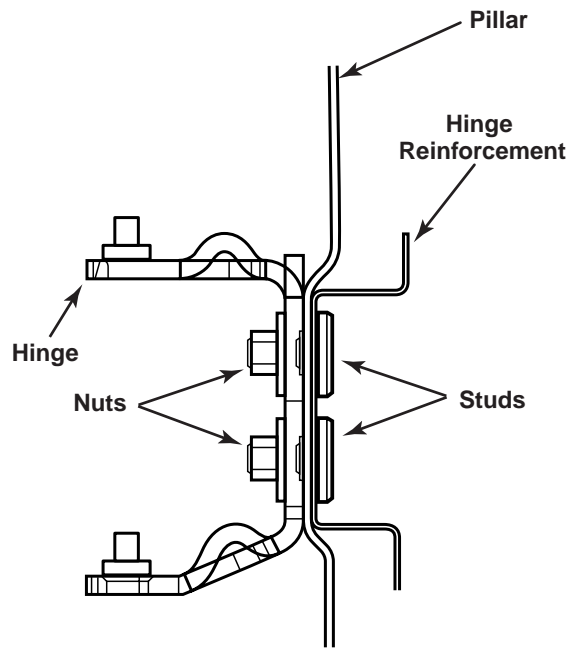
8. Feed fish wire, GM P/N 15017229 or the equivalent, through the hinge, the hinge stud hole and out of the conduit hole in the pillar (Fig. 4-38).
9. Install the stud, GM P/N 15017230, supplied with the service hinge, into the wire end. Pull the stud into position.
10. Hold the stud in position with the hinge and remove the fish wire.

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Rear Body-Side Hinge Replacement Installation Procedure cont'd

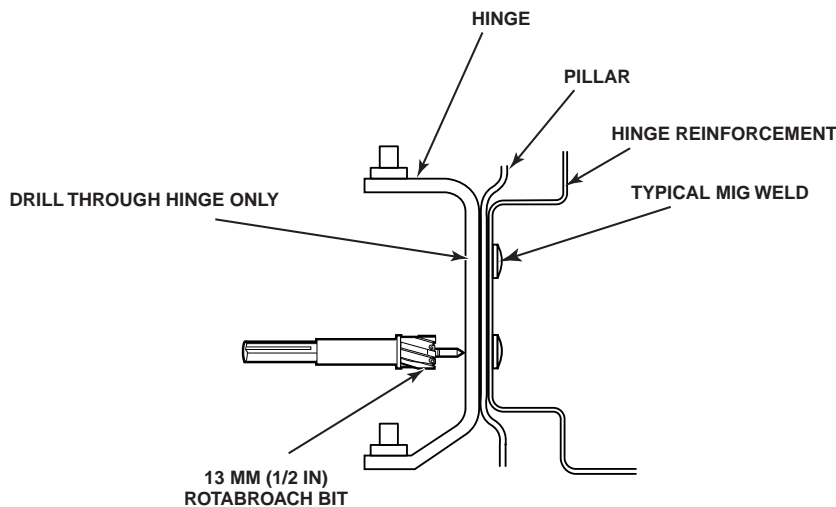
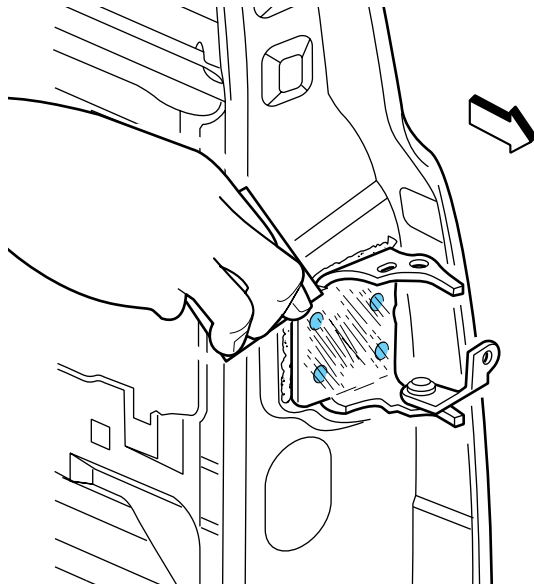
11. Draw the stud tight through the pillar. Use the nuts GM P/N 11516746, supplied.
12. Repeat steps 7 through 10 on the remaining stud locations.
13. Remove each service nut.
14. Apply a full-bodied caulk to the entire hinge mounting surface in order to ensure a proper seal.
15. Install the hinge to the pillar. Use the supplied nuts.
16. Torque the hinge nuts to 25 N·m (18 ft lb).
17. Clean and prepare all of the surfaces as necessary for refinishing.
18. Apply the sealers. Refinish the surfaces as necessary.
19. Install and align all of the related panels and the components.



Rear Door-Side Hinge Replacement

Removal Procedure

1. Remove related panel and components.
2. Remove any excess sealer surrounding the existing hinge and scribe the location of the hinge on the door.
3. Lightly hand-sand the existing door hinge with 100 grit or finer sandpaper in order to locate the four welds that attach the hinge to the door.
IMPORTANT: Punch the center of the weld so that as much of the weld is removed during the drilling as possible.
4. Center punch each of the 4 weld marks on the original hinge base.



5. Drill through the hinge base only at the punch location. Use a 13 mm (1/2 in.) rotabroach hole saw or the equivalent.
6. Remove the hinge. If necessary, use a chisel in order to separate the hinge from the door.
7. Remove all of the remaining weld from the door surface in order to ensure a flush fit of the service hinge.

Rear Door-Side Hinge Replacement

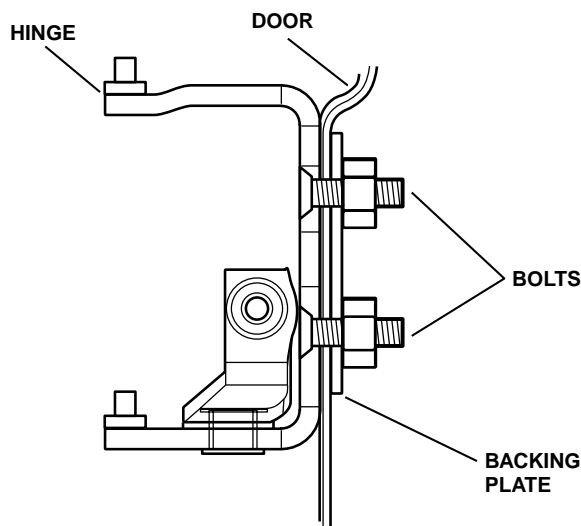
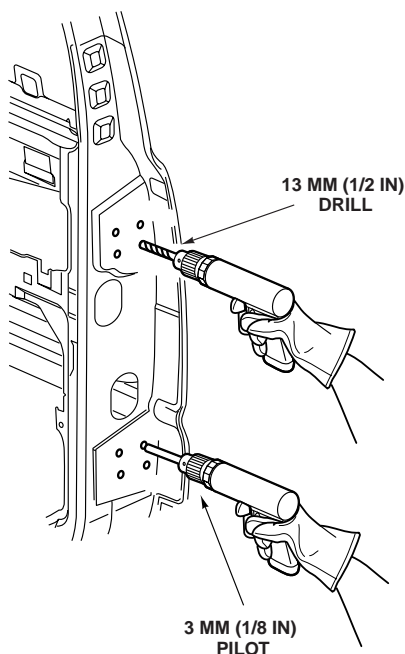
Installation Procedure

1. Repair any damage done to the door during the drilling or the removal.
2. Clean and prepare the backing plate mounting surfaces in order to ensure a flush fit of the backing plate.
3. Position the service hinge within the scribe marks on the door.
4. Center punch each hole location on the door according to the service hinge.
5. Drill a 3 mm (1/8 in.) pilot hole at each center punch location.
6. Drill a 13 mm (1/2 in.) hole at the pilot locations.

IMPORTANT: Prior to refinishing, refer to the publication GM4901M-D-01 GM Approved Refinish Materials for recommended products. Do not combine paint systems. Refer to paint manufacturer's recommendations.

7. Clean and prepare all of the bare metal surfaces.
8. Apply an approved anti-corrosion primer.
9. Apply a full-bodied caulk to the entire hinge mounting surface in order to ensure a proper seal.

10. Align the hinge and the backing plate with the holes in the door.
11. Install the bolts.
12. Torque the bolts to 25 N·m (18 ft lb).
13. Apply the sealers.
14. Refinish the metal surfaces as necessary.
15. Install and align all of the related panels and the components.

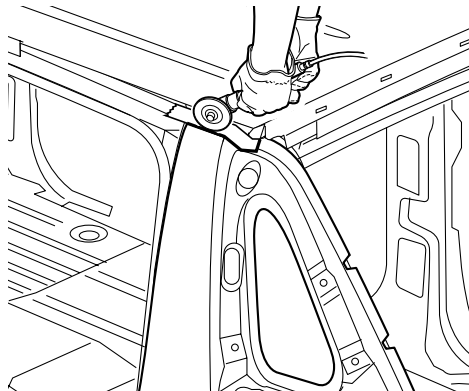
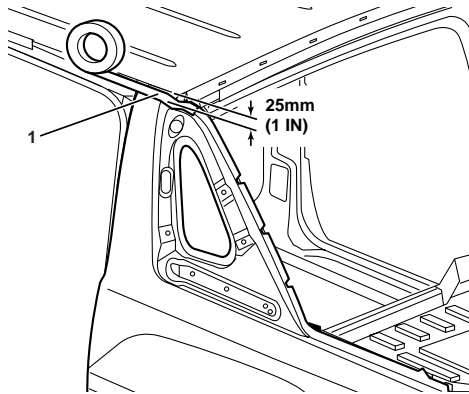
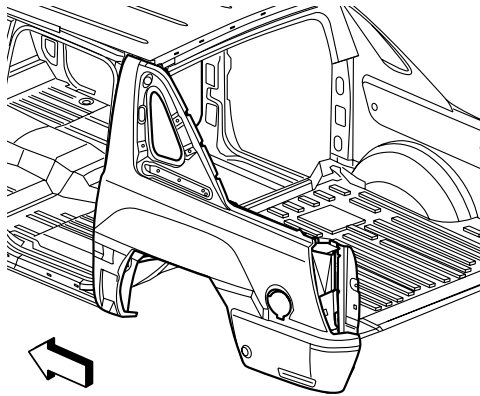


Quarter Panel

Removal Procedure

1. Remove all related panels and components.
2. Restore as much of the damage as possible to factory specifications.
3. Note the location and remove the following as necessary:
 - Sealers
 - Sound deadeners
 - Anti-corrosion materials
4. Apply 25 mm (1 in.) wide tape (1) along the upper edge of the Quarter Panel at the roof line.
5. Cut the Quarter Panel at the bottom edge of the tape.

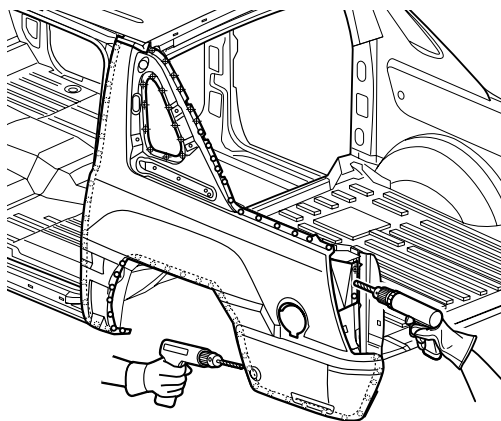
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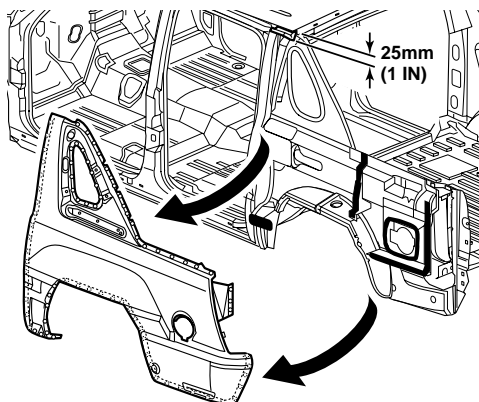
IMPORTANT: Do not damage any inner panels or reinforcements.

Quarter Panel Removal Procedure cont'd

6. Locate and drill out all factory welds. Note the number and location of welds for installation of the service part.



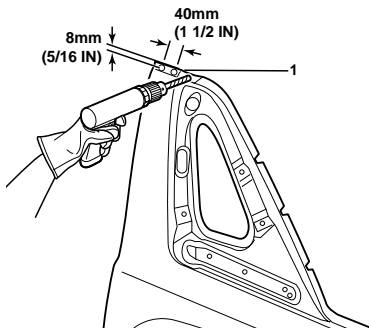
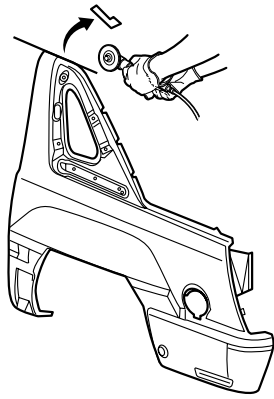
7. Remove the damaged Quarter Panel, leaving a 25 mm (1 in.) flange attached to the roof.



Quarter Panel

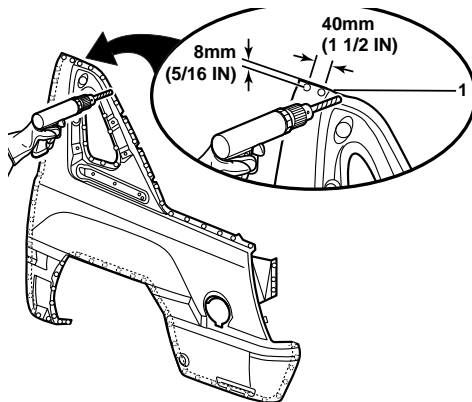
Installation Procedure

1. Trim and discard the upper mounting flange on the service Quarter Panel so that it will fit over the 25 mm (1 in.) flange left from the original panel.



2. Drill 8 mm (5/16 in.) plug weld holes along the sectioning cut on the service part. Locate these holes 13 mm (1/2 in.) from the edge and spaced 40 mm (1-1/2 in.) apart (1).

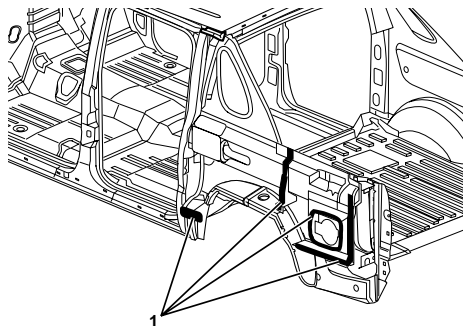
IMPORTANT: In any area damaged beyond recognition, space plug weld holes every 40 mm (1-1/2 in.) apart.



4. Drill 8 mm (5/16 in.) plug weld holes in the service part as necessary in the locations noted from the original panel and along the sectioning cut.
5. Prepare all attachment surfaces as necessary.
6. Apply weld-through primer to all bare metal surfaces.

CAUTION: THE FUEL FILLER OPENING MUST BE PROPERLY SEALED PRIOR TO POSITIONING THE QUARTER PANEL. FAILURE TO PROPERLY SEAL THE QUARTER PANEL COULD RESULT IN EXHAUST GAS LEAKAGE INTO THE INTERIOR OF THE VEHICLE CAUSING PERSONAL INJURY.

7. Install GM P/N 12399117 Sealing Strip between outer wheelhouse and quarter panel gas door pocket.

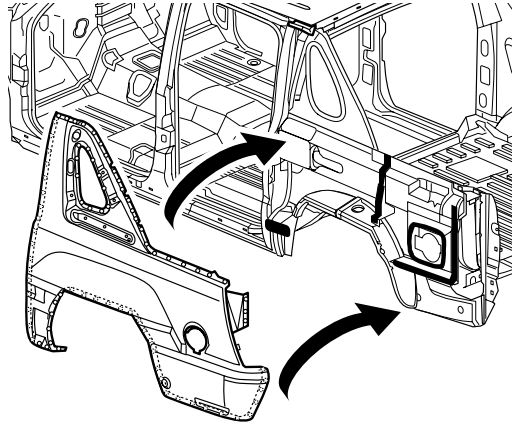


8. Apply internal sealers (1) in the locations noted from the removal procedure.

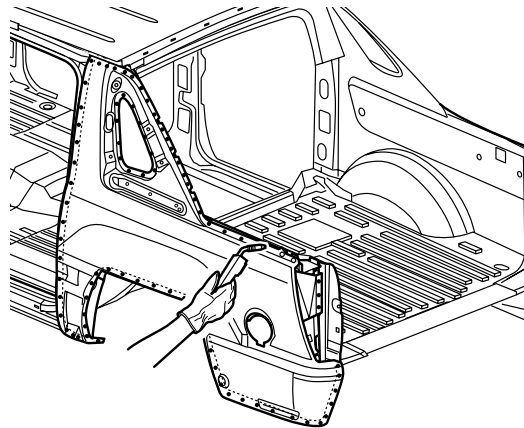
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Quarter Panel Installation Procedure cont'd

9. Position the Quarter Panel to the vehicle.

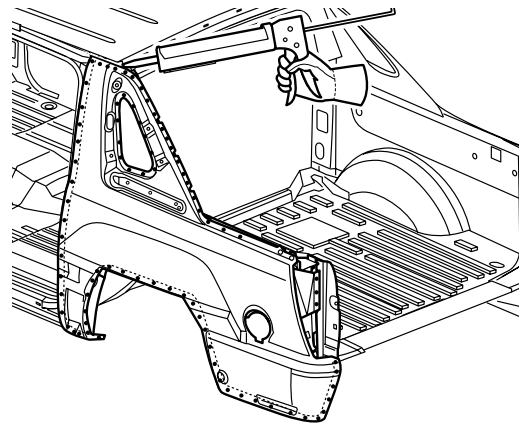


10. Plug weld accordingly.
11. To create a solid weld with minimum heat distortion, make 25 mm (1 in.) stitch welds along the seam with 25 mm (1 in.) gaps between them. Then go back and complete the stitch weld.
12. Clean and prepare all welded surfaces.



IMPORTANT: Prior to refinishing, refer to publication GM4901M-D-01 GM Approved Refinish Materials for recommended products. Do not combine paint systems. Refer to paint manufacturer's recommendations.

13. Apply the following as necessary:
 - Anti-corrosion primer
 - Sound deadeners
 - Sealers
14. Refinish as necessary.
15. Install all related panels and components.



Front Bumper Bracket Replacement— 1500 Series

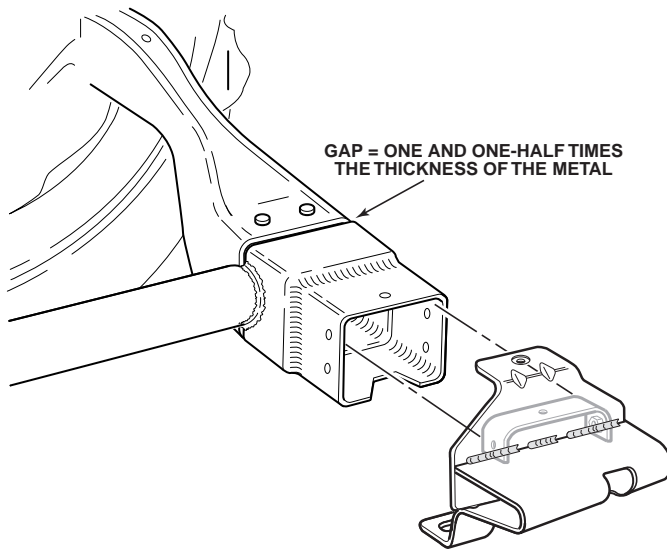
1. Remove related panels and components.
2. Remove damaged bumper bracket.

IMPORTANT: Do not remove any material from end of frame rail.

3. Position the service template on the end of the frame rail; use 3M's Repositionable Adhesive or equivalent.
4. Drill three 13 mm (1/2 in.) holes at locations indicated on template that is supplied with part.

IMPORTANT: Prior to refinishing, refer to the publication GM4901M-D-01 GM Approved Refinish Materials for recommended products. Do not combine paint systems. Refer to paint manufacturer's recommendations.

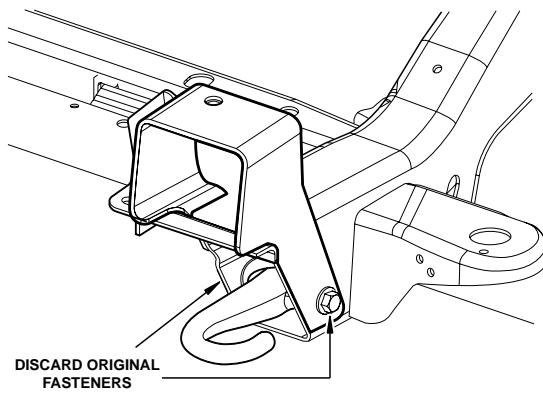
5. Apply approved anti-corrosion primer to bare metal surfaces.
6. Position replacement bumper bracket.
7. Install bolts, torque to 50 N·m (37 ft. lb.).



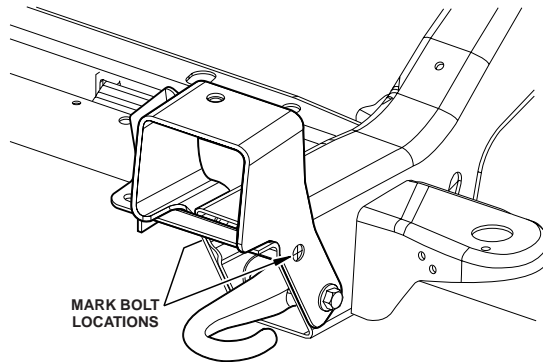
Front Bumper Bracket Replacement— 2500 Series

1. Remove related panels and components.
2. Remove damaged bumper bracket.
3. Visually inspect frame and restore all damage to factory specifications using three-dimensional measuring.

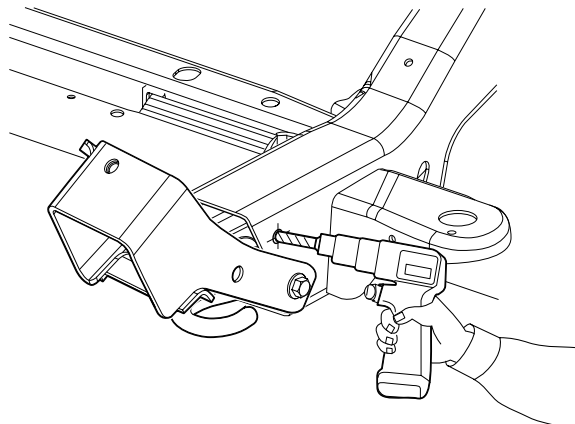
IMPORTANT: If vehicle is equipped with tow hooks, discard original fasteners.



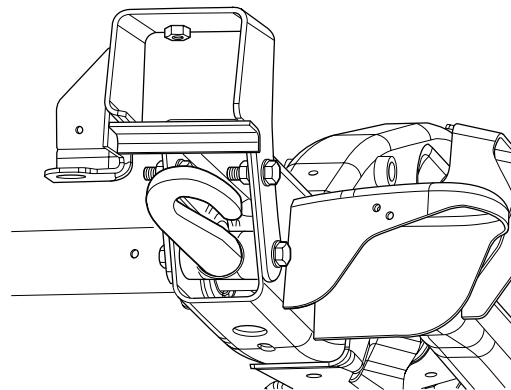
4. Align replacement bracket lower bolt holes with tow hook mounting locations and install bolts supplied.
5. Align front edge of bracket with front edge of frame and mark upper bolt locations on frame.



6. Rotate bracket forward and drill 13 mm (1/2 in.) holes in frame at upper bolt locations.
7. Rotate bracket back into position.



8. Install fasteners supplied. Torque bracket fasteners to 70 N·m (52 ft. lb.).



Rail End Front Crush Cap Replacement

Removal Procedure

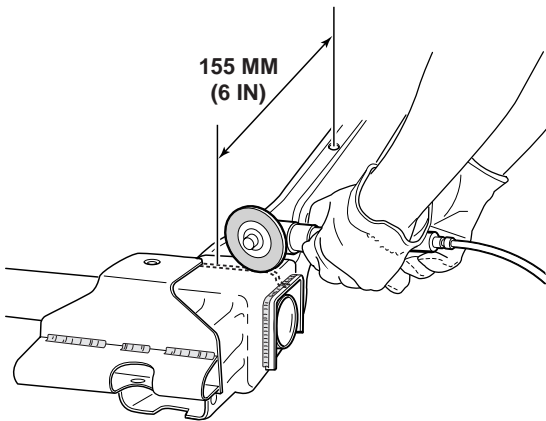
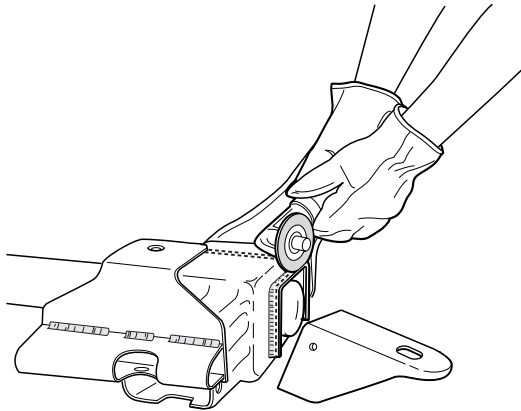
1. Remove all of the related panels and the components.

IMPORTANT: If the crush cap is bent or damaged in any way you must replace the crush cap.

2. Visually inspect the damage. Use three-dimensional measuring in order to restore all of the damage rearward of the Crush Cap to the factory specifications.

IMPORTANT: Use care not to damage the rail.

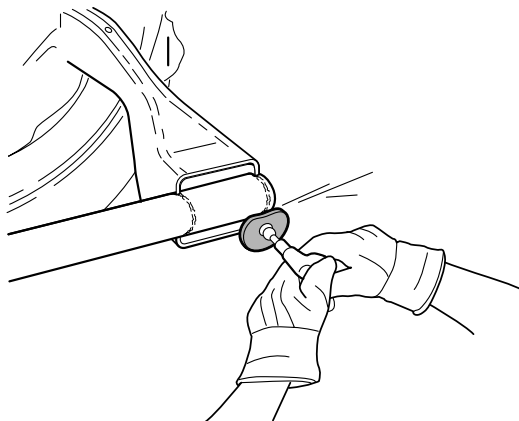
3. Remove the core support mounting bracket.



4. Locate the brake line attachment hole on the top of the rail. Measure forward 155 mm (6-1/8 in.). This is the cut line.
5. Scribe a line 360 degrees around the frame rail and in front of the cross tube.

CAUTION: DO NOT DAMAGE THE CROSS TUBE

6. Remove the Crush Cap at the cut-line and the forward edge of the cross tube.

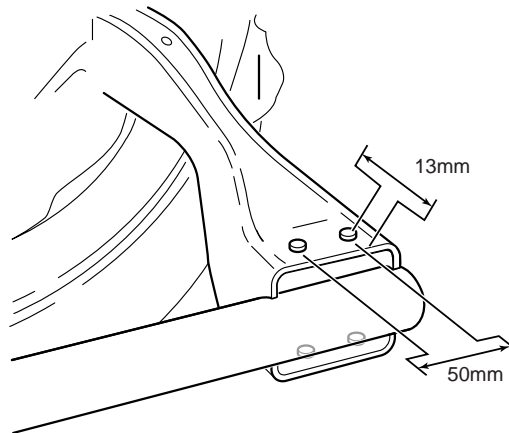


7. Grind the remaining weld off of the cross tube where you removed the damaged Crush Cap.

Rail End Front Crush Cap Replacement

Installation Procedure

1. Drill 4 plug weld holes (2 at the top and 2 at the bottom), 13 mm (1/2 in.) from the cut line and 50 mm (2 in.) apart on the existing frame rail.
2. Prepare all of the bare metal surfaces with a suitable weld through primer.



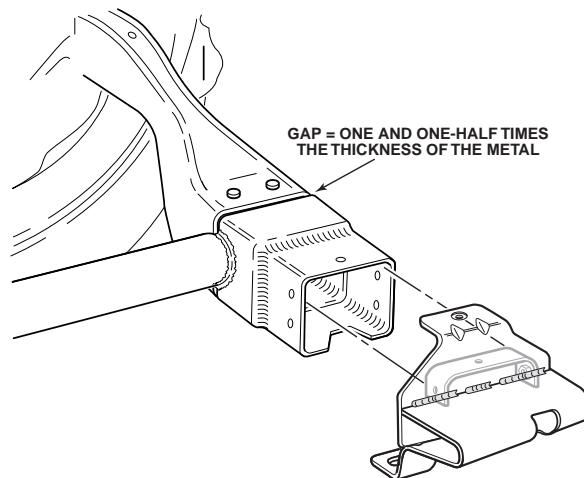
IMPORTANT: The replacement bumper bracket is a bolt-on component that must be ordered separately.

IMPORTANT: Retain a gap of one and one-half times the metal thickness at the butt joint when attaching the service part to the vehicle.

3. Install and position the replacement Crush Cap using three-dimensional measuring.
4. Tack weld the part into position at the initial plug weld holes.
5. Inspect the service part for proper dimensions.
6. Stitch weld along the entire sectioning joint. Make 25 mm (1 in.) welds along the seam with 25 mm (1 in.) gaps between.
7. Complete the stitch weld.
8. Position the new core support mounting bracket and weld the bracket in place according to the specified dimensions.
9. Clean and prepare the welded surfaces.

IMPORTANT: Prior to refinishing, refer to the publication GM4901M-D-01 GM Approved Refinish Materials for recommended products. Do not combine paint systems. Refer to paint manufacturer's recommendations.

10. Apply an approved anti-corrosion primer.
11. Apply the sealers.
12. Refinish the welded surfaces as necessary.
13. Replace the related panels and the components.

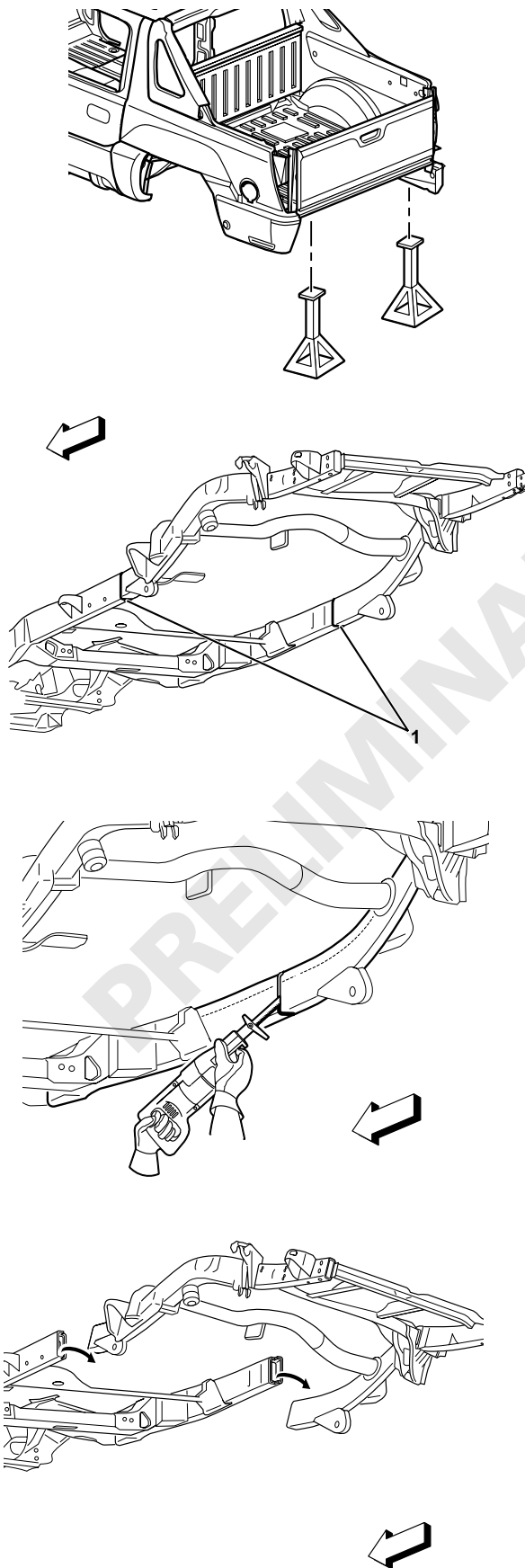


Rear Module Replacement

Removal Procedure

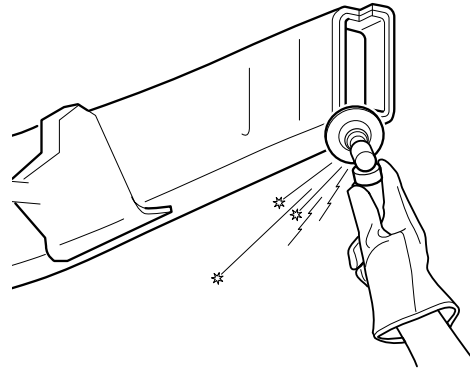
1. Remove all related panels and components.
2. Restore as much of the damage as possible to factory specifications.
3. Support the rear of the body at the outer edges of the rear cross sill to keep the vehicle stable while performing rear module replacement.
4. Locate the rear module factory seams (1) in front of rear axle trailing arm mounts.
5. Cut each frame rail at the rear edge of the factory weld.
6. Remove the damaged rear frame module.

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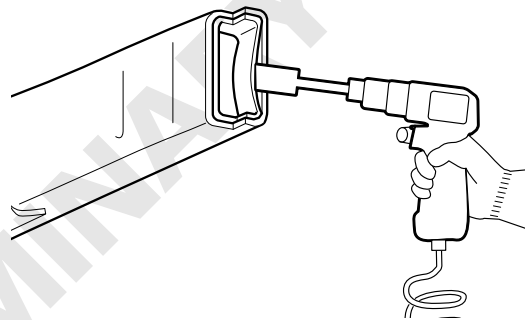


Rear Module Replacement Removal Procedure con't

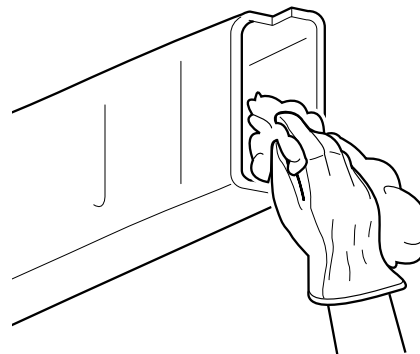
7. Grind remaining portion of rear rails back to middle section.



8. Remove the remaining section of the rear rails from the inside of middle section.



9. Remove the wax coating from inside and outside surfaces of the middle rails.



Rear Module Replacement

Installation Procedure

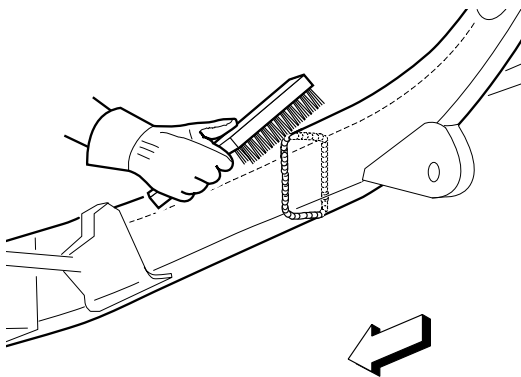
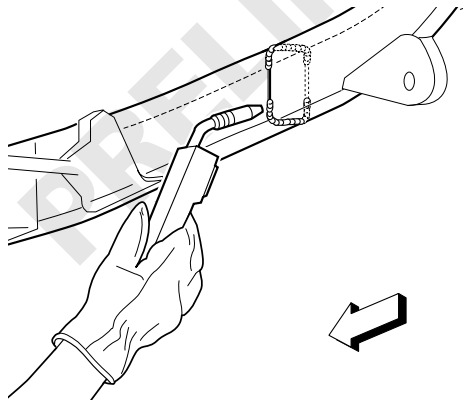
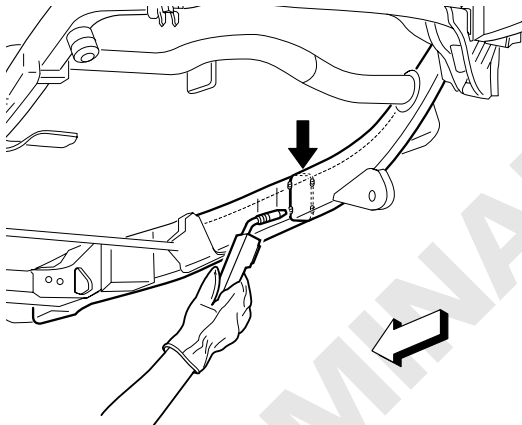
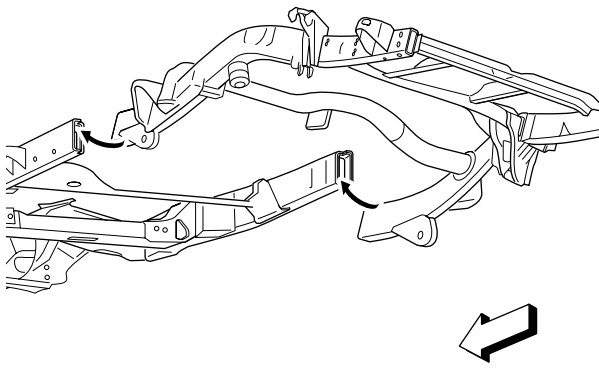
1. Prepare all bare metal surfaces as necessary.
2. Install and position the replacement module using three-dimensional measuring. *Refer to frame dimensions.*

3. Tack weld the rear module into position.

IMPORTANT: Check all measurements three-dimensionally to ensure proper position of the rear module. Refer to frame dimensions.

4. Continuous-weld upper and lower horizontal joints from corner to corner.
5. Continuous-weld inner and outer vertical joints from corner to corner.

6. Clean and prepare the welded surfaces.
7. Apply suitable wax coating to the inside and the outside of the rails at the repair locations.
8. Install all related panels and components.



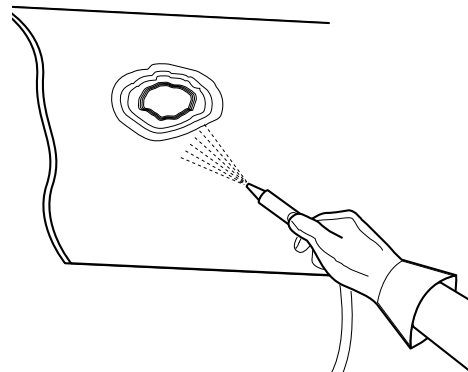
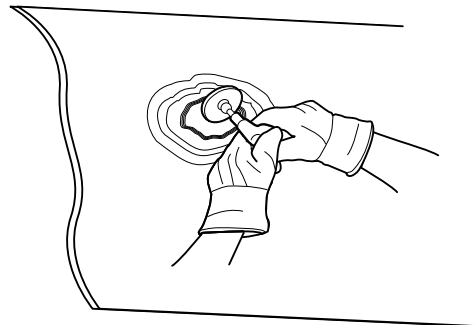
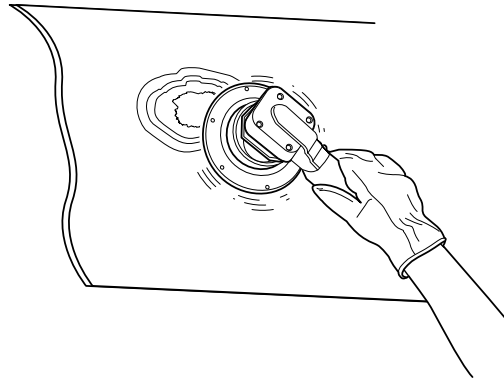
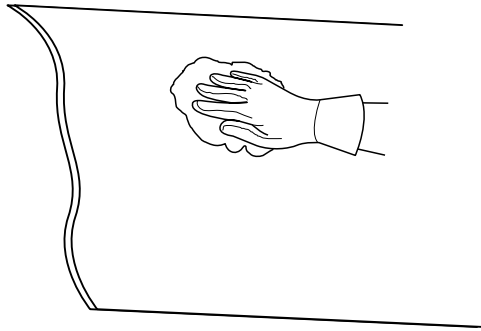
SRIM Composite Repair

The Avalanche midgate and tailgate, as well as the Chevrolet Pro-tec® composite pickup box, can be repaired using SRIM composite repair procedures.

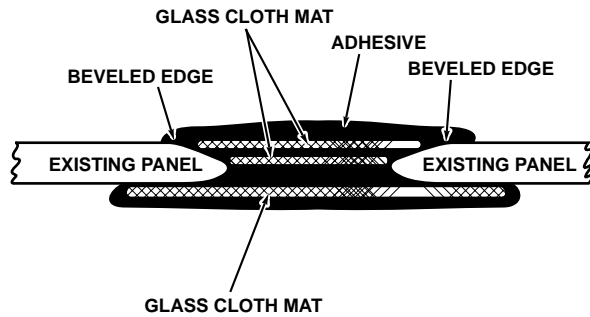
Repair Procedure

1. Remove all related panels and components.
2. Clean front and back sides of area to be repaired.
3. On both sides of the damaged area, use an 80 grit disc on a D.A. sander to feather out the area where repair is to be performed.
4. Bevel the edges on both sides of the damaged area with a 50 grit abrasive disc.
5. Clean the repair area with a tack rag and compressed air.

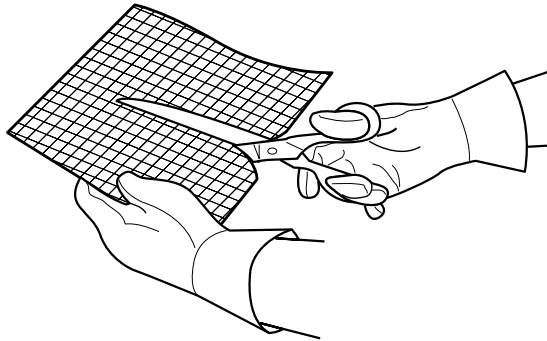
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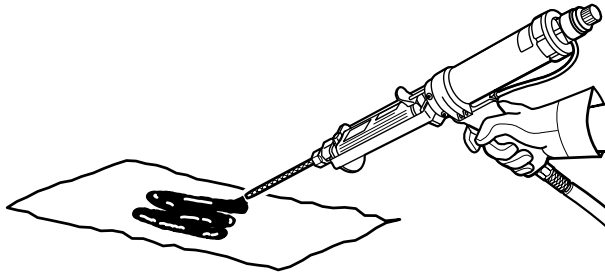
SRIM Composite Repair Repair Procedure con't



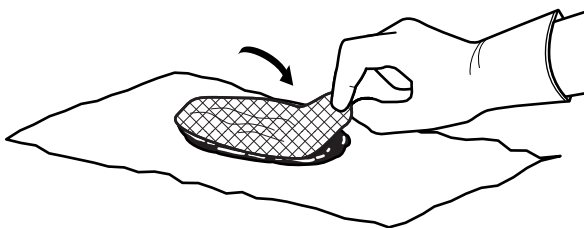
6. Create a multi-layered reinforcement patch, as shown, using the procedure outlined in steps 7–27.



7. Cut one piece of glass cloth mat to form a patch large enough to extend 38 to 50 mm (1-1/2 to 2 in.) beyond the damaged area.



8. Apply an 8 mm (1/4 in.) layer of repair material (contact SIA Adhesives, Inc. customer service at 1-330-374-2468 for SRIM repair kit P/N 30208030001) to a piece of release paper, such as wax paper or polyethylene film, covering an area as large as the glass cloth mat patch.

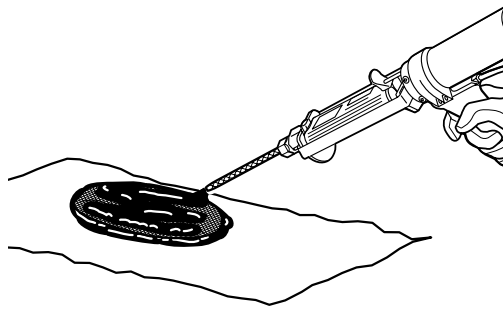


9. Place the pre-cut piece of mat over the pool of repair material.

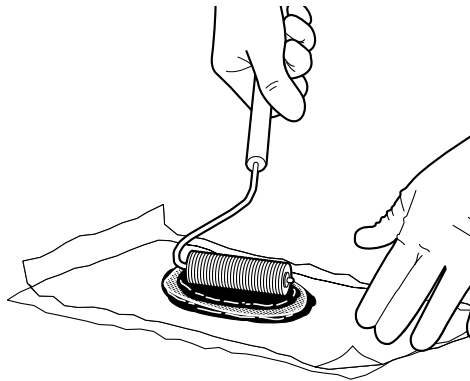
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SRIM Composite Repair Repair Procedure con't

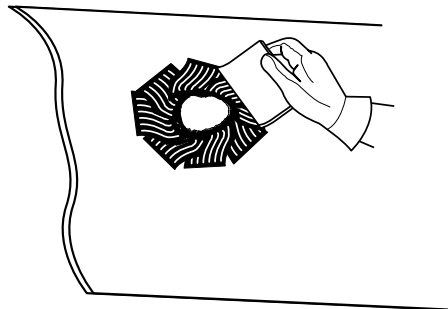
10. Apply an 8 mm (1/4 in.) layer of repair material over the glass cloth mat.



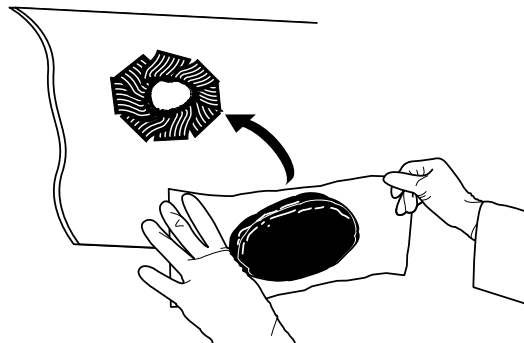
12. Place a second sheet of release paper over the repair patch.
12. Roll patch with saturation roller until the mat is completely saturated with repair material.
13. Separate the two sheets of release paper.



14. Apply repair material over the backside of the damage. Use an applicator to spread repair material 38 to 50 mm (1-1/2 in to 2 in.) beyond the damaged area.



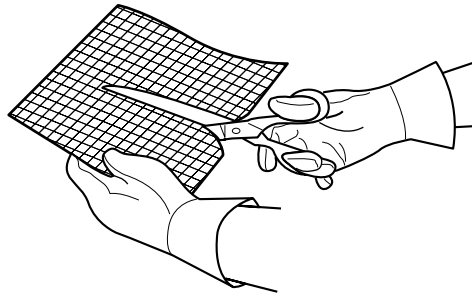
15. Place the repair patch over the backside of the repair area, use an applicator to smooth the patch out and remove all trapped air.
16. Secure the release paper and patch in place with tape.



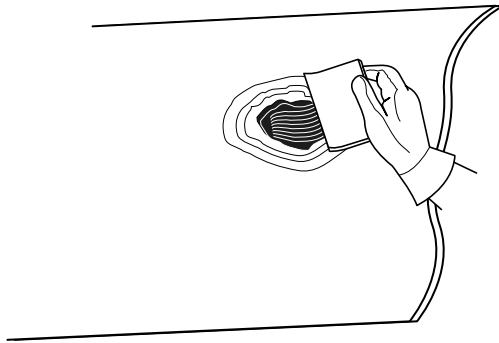
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SRIM Composite Repair Repair Procedure con't

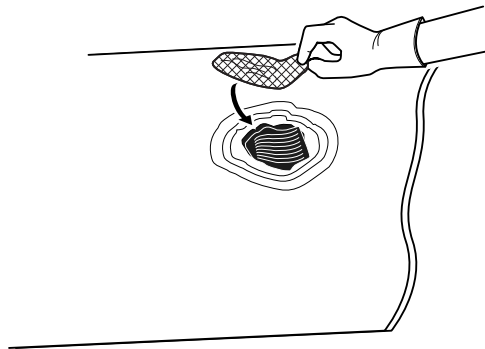
17. Cut two pieces of glass cloth mat large enough to cover the beveled area on the front side of repair.



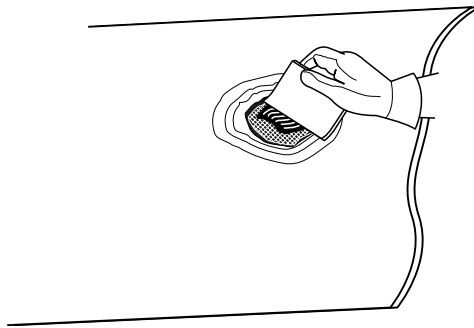
18. Mix and apply a layer of repair material to the front of the repair, repair material should be at a level slightly above the surrounding area.



19. Lay a pre-cut piece of mat into the repair material, use an applicator to saturate the mat and remove all trapped air.



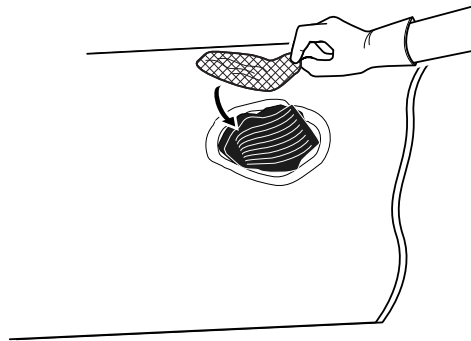
20. Apply a second coat of repair material and smooth out the surface with an applicator.



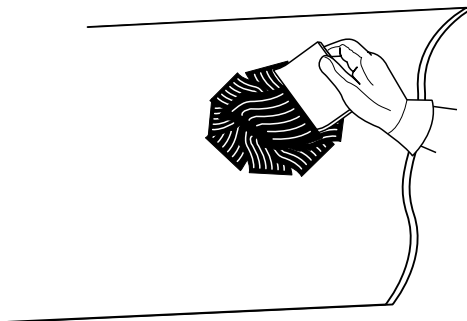
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SRIM Composite Repair Repair Procedure cont'd

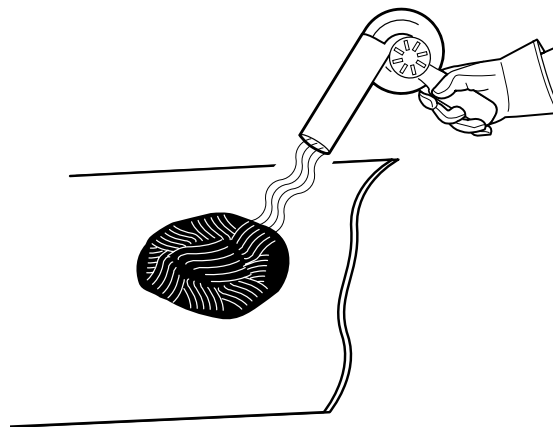
21. Place the second layer of pre-cut mat over the repair material, smooth out and remove all trapped air.



22. Apply a third coat of repair material to the front of the repair, and place a sheet of release paper over it. Use a saturation roller to ensure full saturation of repair material into the mat.



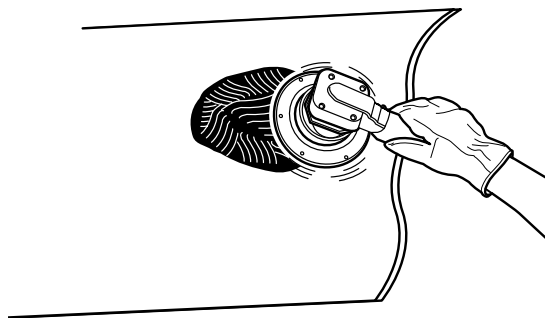
23. Cure the repair material according to the adhesive manufacturer's recommendations.

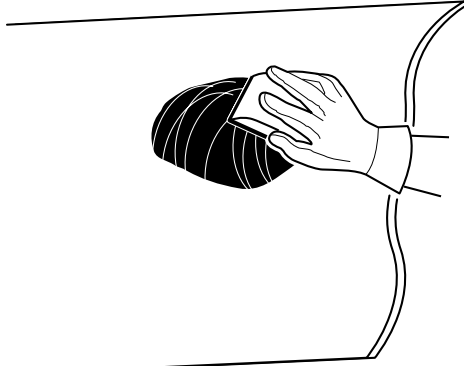


24. Rough out the repaired surface with an 80 grit disc on a dual-action sander.

25. Apply necessary skim coats of repair material until surface contour is achieved.

—continued

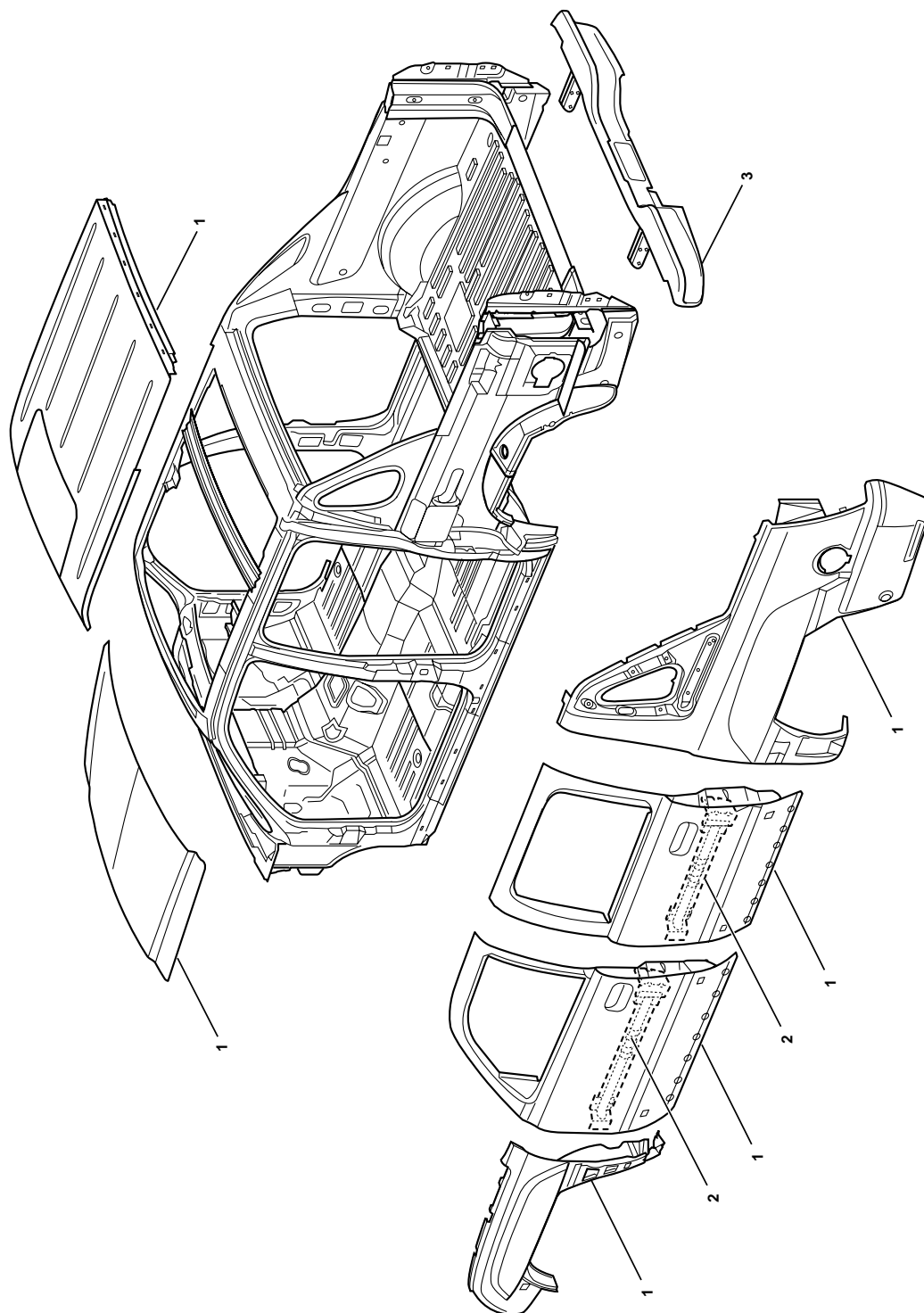




Composite Box Repair Procedure cont'd

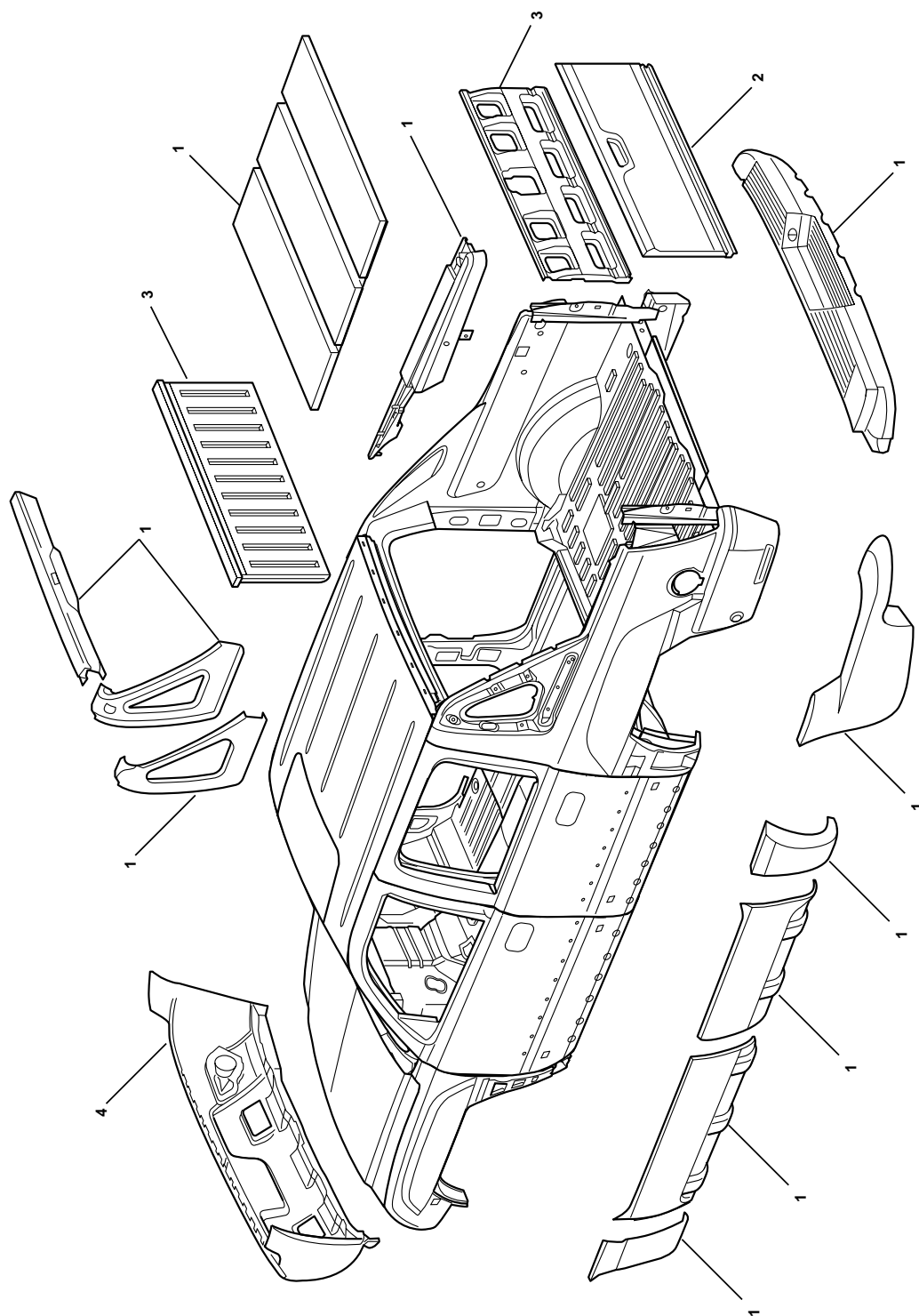
26. Finish contour sanding with a 220 grit abrasive or finer.
27. Refinish as necessary. Follow paint manufacturer's recommendations for application instructions.

Avalanche Panel Identification (Metal)



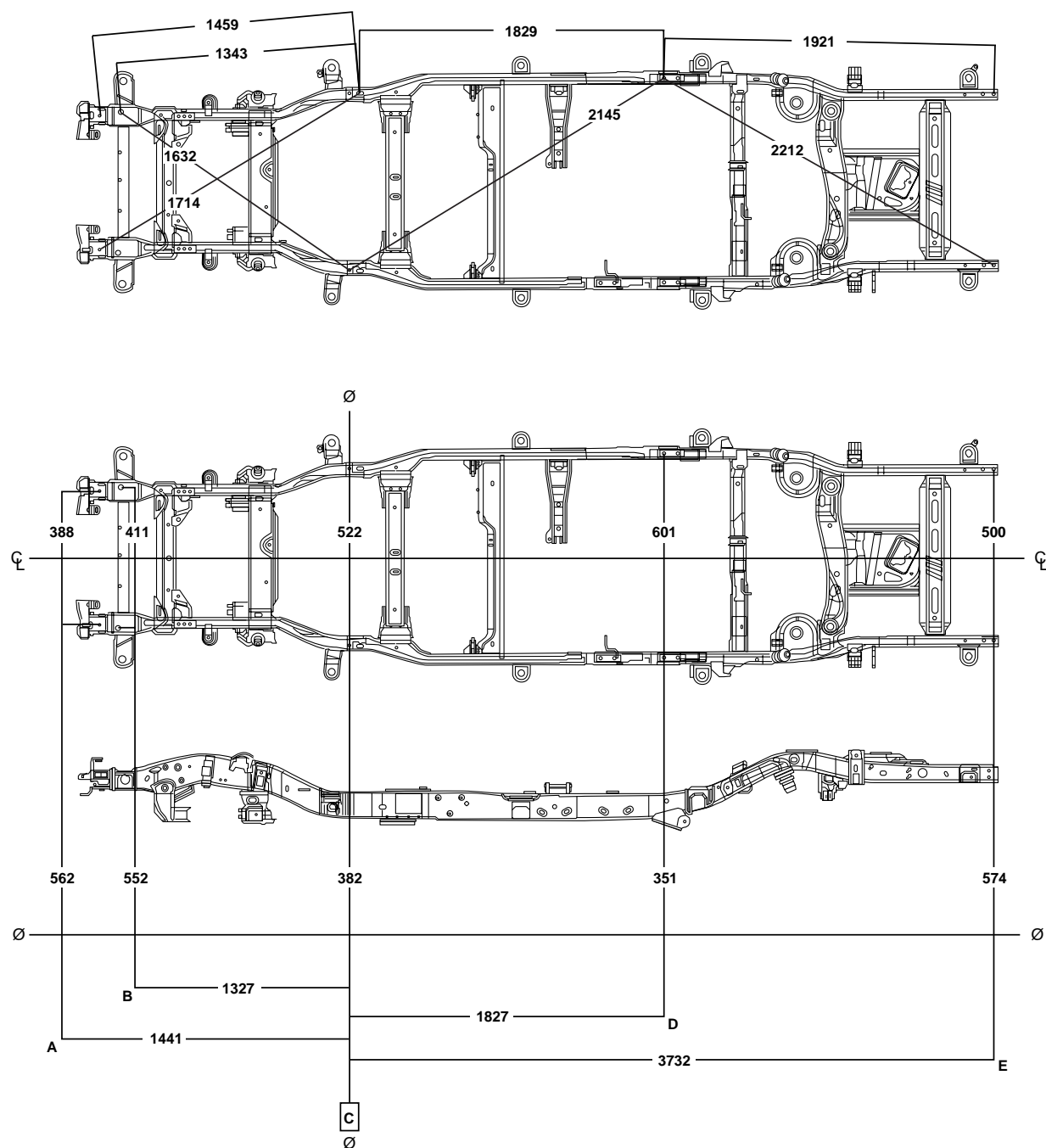
1. Two-Sided Galvanized Steel
2. Ultra High-Strength Steel
3. Mild Steel

Avalanche Panel Identification (Plastic)



1. Thermoplastic Olefin (TPO)
2. Fiberglass Reinforced Polyester
3. Structural Reaction Injection Molded (SRIM)
4. Polyolefin

2000 and Newer Chevrolet Suburban/GMC Yukon XL 2002 Chevrolet Avalanche Frame Dimensions



Description	Location	Length	Width	Height
13 mm hole	A	1441	388	562
32 mm hole	B	1327	411	552
22 x 19 mm slot zero line	C	0	522	382
33 x 17 mm hole	D	1827	601	351
19 mm hole	E	3732	500	574

All dimensions are measured in millimeters, from a zero line, center line, and a common datum. All dimensions are symmetrical, unless otherwise specified.